

HERSTORY 2 STUDY

Process evaluation of the combination HIV prevention intervention for adolescent girls and young women (AGYW), Global Fund grant period 2019 to 2022

REPORT 5/5: RECORD REVIEW

1. OVERVIEW OF FINDINGS AND COMBINED RECOMMENDATIONS | 2. AGYW SURVEY | 3. QUALITATIVE EVALUATION | 4. LEADERSHIP AND MANAGEMENT EVALUATION

HERStory 2 Study: Process evaluation of the combination HIV prevention intervention for adolescent girls and young women (AGYW), Global Fund grant period 2019 to 2022

Record review

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Executive summary

Introduction

From 2016 to the present day, the Global Fund to Fight AIDS, TB and Malaria has invested in a combination intervention for adolescent girls and young women (AGYW) in South Africa, with the aim of reducing HIV incidence, teenage pregnancy, and gender-based violence and increasing retention in school and access to economic opportunities. Combination HIV prevention interventions, which merge effective biomedical, behavioural and structural interventions for combined delivery, are one of the key strategies for reaching the 90-90-90 targets and achieving the Sustainable Development Goal (SDG) of ending the HIV epidemic by 2030 (1). Catherine Mathews and her colleagues at the South African Medical Research Council (SAMRC) were requested to conduct a process evaluation of the AGYW combination intervention being implemented during the 2019 to 2022 Global Fund grant period.

Informed by the Medical Research Council guidance on process evaluation of complex interventions (2), and by the importance of evaluating service coverage cascades, we conducted a process evaluation of the AGYW combination intervention 2019 to 2022. This process evaluation has several sub-components or sub-studies including the AGYW quantitative survey and qualitative report. This report describes the review of the AGYW programme routine monitoring data. The other sub-studies are described in associated reports.

Aims and objectives

The aim of this process evaluation was to assess whether the intervention was being **implemented as planned** and whether the implementers were on a trajectory to achieve the outcomes, with reference to the theory of change (logic model) for the intervention being delivered in the current grant period 2019 to 2022. This report describes one component of the overall HERStory process evaluation: the record review of all beneficiaries. Through the record review, we sought to evaluate the **coverage** of the intervention and whether it was aligned to the theory of change.

The objectives were as follows:

- a) Is the **coverage** of the intervention aligned to the targets for programmatic coverage, according to age and geography?

- b) Is the **coverage** of the intervention aligned to the theory of change? Here we focused on selected indicators of service/intervention coverage for beneficiaries in need of these services/interventions.
- c) To describe intervention **coverage** by age, occupation, sexual behaviour (as an indicator of HIV risk), district and time (before and after COVID-19).

Study design

We conducted a quantitative analysis of routine programme monitoring data. We reviewed all the records from the 11 intervention districts (12 sub-districts) that were available at the time of analysis (June 2021).

Record review methods

A team of consultants at Zenysis were contracted by NACOSA to compile the programme records on their platform, in a format that complied to specifications given by NACOSA. The SAMRC investigators were given access to this platform to conduct a record review using all the available programme monitoring data captured by the “My Hope” system. We used this data to describe coverage of core and layered services in the first two years of the programme (01 April 2019 – 31 March 2021), although implementation of the programme only began in September 2019.

Results

Coverage of core services by time, age, district, occupation, school status and gender

The target for coverage with the core package of services was 117 607 AGYW in Year 1 (Y1: 01 April 2019 – 31 March 2020) and 235 195 AGYW in Year 2 (Y2: 01 April 2020 – 31 March 2021) of the AGYW programme. In Y1, a total of 80 321 AGYW were reached with core services and 68% of the target was met (Figure A). In Y2, a total of 201 812 AGYW were reached and 86% of the target was met (Figure B). Most districts (10 out of 11) met at least 60% of their target in Y1 of the programme. In Y2, 9 out of 11 districts met 60% or more of their target, with 6 of these districts meeting 90% or more of their target and 4 districts exceeding their target.

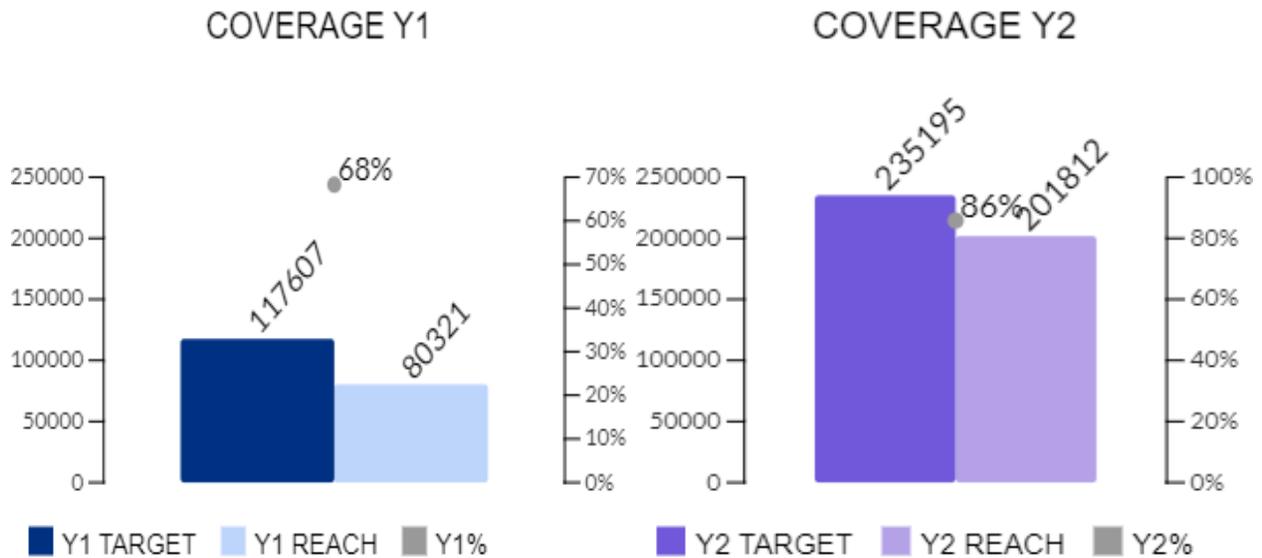


Figure A and B: Number of AGYW reached with core services in 1) Year 1 (Y1) and 2) Year 2 (Y2) of the programme compared to annual targets

While AGYW including females, transgender men, and transgender women, in the 15 to 24 age range, were the primary target of the AGYW programme, boys and men as well as individuals less than 15 or greater than 24 years old were not turned away from services if they wanted to participate. Of all beneficiaries who participated in the programme, 99% to 100% were female and identified as girls or young women in Y1 and Y2 respectively.

Focusing only on AGYW in the 15 to 24 year age range, 71% (Y1) to 59% (Y2) were in the 15 to 19 year age group and 29% (Y1) to 41% (Y2) were in the 20 to 24 year age group. Similarly, 71% (Y1) to 57% (Y2) of AGYW were reached in school versus 26% (Y1) to 42% (Y2) reached out of school. For the first two years of the programme, the most common occupation of AGYW reached in the younger age group was to be in school (Y1: 50 891 AGYW; Y2: 104 486 AGYW) compared to the second most common “occupation” which was not in education, employment, or training (NEET) (Y1: 2622 AGYW; Y2: 10 850 AGYW). The most common occupation in the older age group was NEET (Y1: 7275 AGYW; Y2: 39 748 AGYW) compared to the second most common occupation which was to be in school (Y1: 5902 AGYW; Y2: 15 504 AGYW) or a TVET college (Y1: 4969 AGYW; Y2: 15 689 AGYW).

With regards to the impact of the COVID-19 lockdown on the intervention, Figure C shows that the number of AGYW reached is higher in bar 2 (40 267 AGYW) which represents the three months preceding the lockdown (January to March 2020) compared to bar 3 (24 525 AGYW) which represents the three

months after the start of the lockdown (April to June 2020). From July 2020 to March 2021 (bar 4 to 6), the number of AGYW reached per quarter ($\geq 55\ 005$ AGYW) began to increase to numbers higher than before the lockdown (bar 2) (40 267 AGYW).

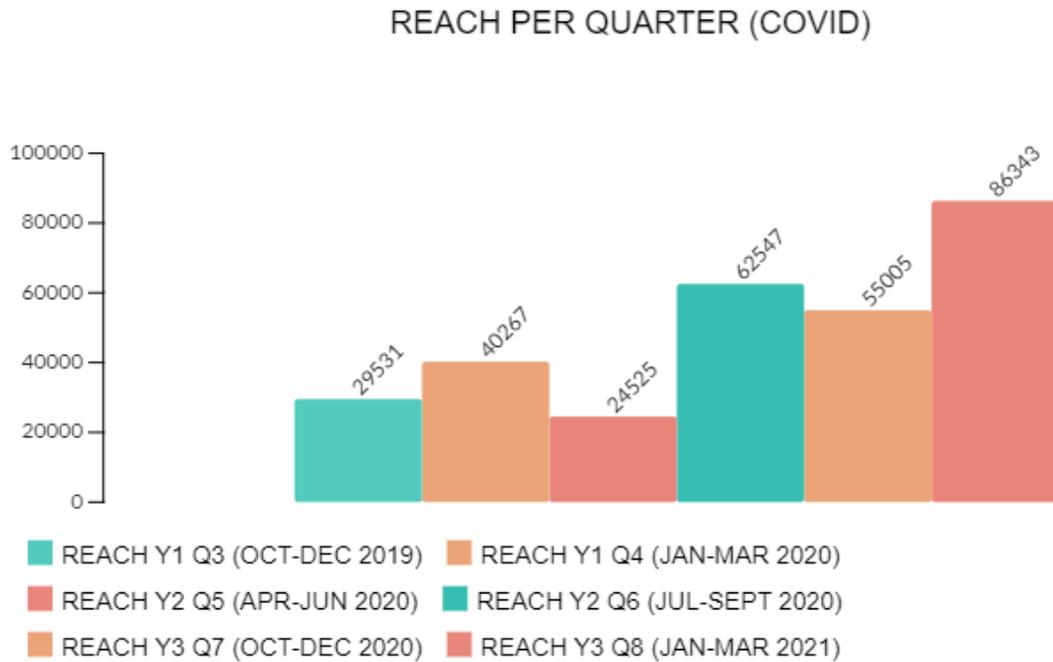


Figure C: Number of AGYW reached with core services per quarter of the programme from 01 October 2019 to 31 March 2021

Coverage of key biomedical services

Biomedical data is not available for all beneficiaries reached by the programme. Thus, this section only includes information on AGYW who received biomedical services, including HIV testing. The number of AGYW who were tested for HIV through biomedical services increased substantially from Y1 (75 989 AGYW) to Y2 (179 117 AGYW) of the programme (Figures D and E). The percentage of AGYW tested for HIV who were newly diagnosed with HIV was 1% in Y1 (415 AGYW) and 1% in Y2 (1888 AGYW). Linkage to care targets were based on a 5% positivity yield assumption for new diagnoses. However, finding HIV-positive AGYW appears to have been a challenge throughout the programme. The number of AGYW who were known HIV-positive on ART increased from 73 in Y1 to 1107 in Y2. The number of tested AGYW who were known HIV-positive not on ART was lower than known HIV-positive AGYW on ART in Y1 (42 AGYW) and Y2 (678 AGYW) of the programme. The total number of HIV-positive AGYW who were tested through biomedical services increased from 530 in Y1 (1%) to 3673 in Y2 (2%).

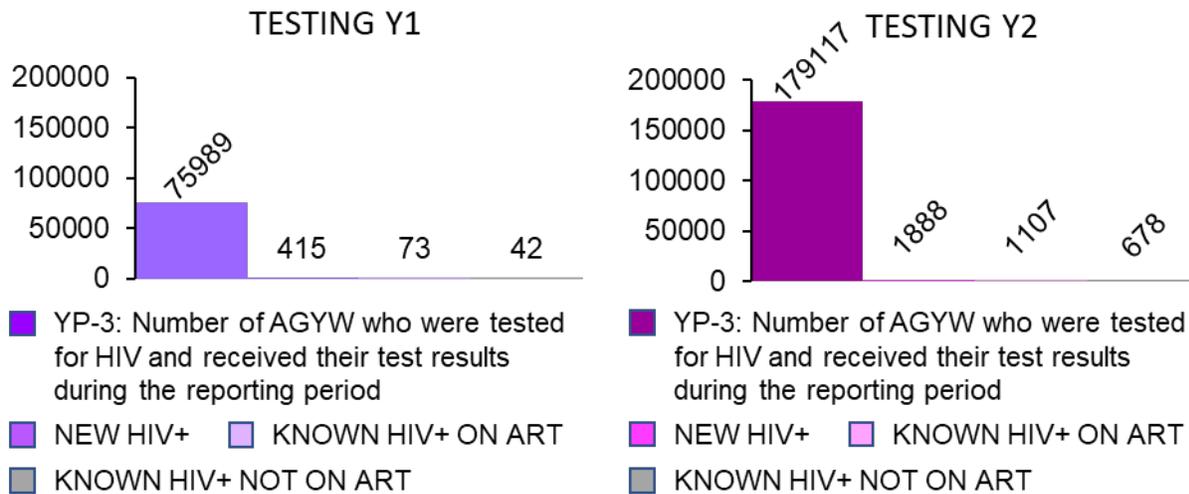


Figure D and E: Number of AGYW who were tested for HIV and received their test results during the reporting period, were newly diagnosed as HIV-positive, were known HIV-positive on ART or were known HIV-positive not on ART in 12) Year 1 (Y1) and 13) Year 2 (Y2) of the programme

As shown in Figures F and G, 603 AGYW were newly initiated on PrEP in the first year of the programme and 21 AGYW were already using PrEP while 12 733 AGYW were newly initiated on PrEP in the second year of the programme and 1330 were already using PrEP. While we do not have reliable data on the number of AGYW who were retained on PrEP due to suboptimal health information system functionality, we can see that the programme had the potential to meet 30% of the target that had been set for PrEP use in Y1, based on the number of AGYW newly initiated on PrEP and already using PrEP, and 140% of the target set for PrEP in Y2 of the programme.

When stratified by age, the number of AGYW newly initiated on PrEP and already using PrEP was very low for both age groups in Y1. In Y2, a similar number of AGYW were newly initiated on PrEP in the 15 to 19 year age group (6401 AGYW) compared to the 20 to 24 year age group (6390 AGYW). The number of AGYW already using PrEP (719 AGYW) was higher in the 20 to 24 year age group compared to the 15 to 19 year age group (642 AGYW).

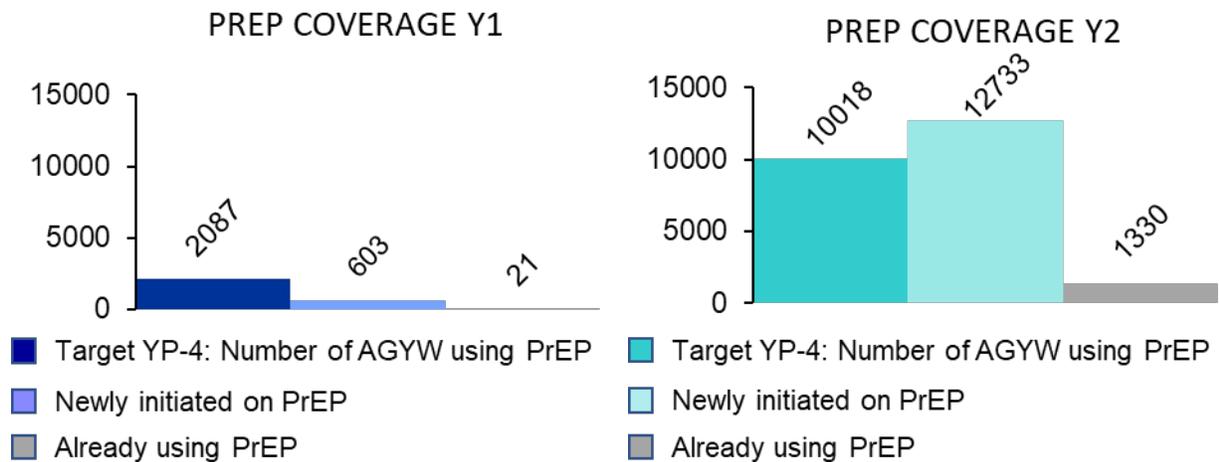


Figure F and G: Number of AGYW newly initiated on PrEP and already using PrEP for 15) Year 1 (Y1) and 16) Year 2 (Y2) of the programme compared to targets

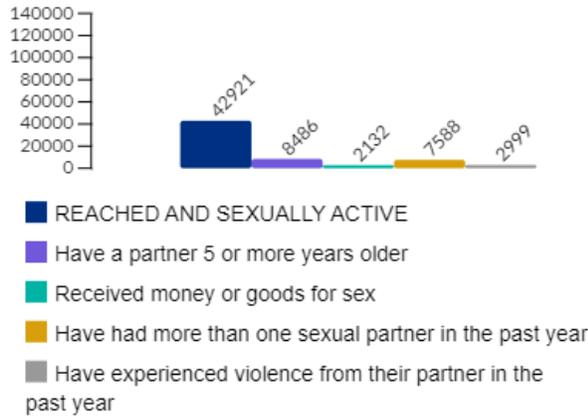
Coverage of core services by sexual behaviour and HIV risk

This section will report on sexual behaviours among AGYW who were reached by core services and reported that they were sexually active, meaning that they had reported ever having sex, using information from the risk assessment component of the core services. Most AGYW (Y1: 53%; Y2: 62%) reported that they were sexually active. Figures H and J show the percentage of sexually active AGYW who reported they had a partner 5 or more years older (Y1 and Y2: 20%), received money or goods for sex (Y1: 5%; Y2: 3%), had more than one sexual partner in the past year (Y1: 18%; Y2: 14%) or had experienced violence from their partner in the past year (Y1: 7%; Y2: 1%).

The above mentioned sexual behaviours put AGYW at a higher risk of HIV infection if they lead to less effective condom use. We found that a lower percentage of sexually active AGYW used condoms every time they had sex (defined here as effective condom use) in the 20 to 24 year age group (Y1: 52%; Y2: 58%) compared to the 15 to 19 year age group (Y1: 61%; Y2: 64%). Furthermore, effective condom use was lower among AGYW who engaged in transactional sex compared to the broader population of AGYW who were sexually active, which may include AGYW who engaged in transactional sex or did not.

In terms of pregnancy and childbirth, 22% of the 249 786 AGYW reached over the first two years of the programme had ever been pregnant. Of the 55 451 AGYW who had ever been pregnant, 88% reported they had children.

SEXUAL BEHAVIOUR AMONG SEXUALLY ACTIVE AGYW Y1



SEXUAL BEHAVIOUR AMONG SEXUALLY ACTIVE AGYW Y2

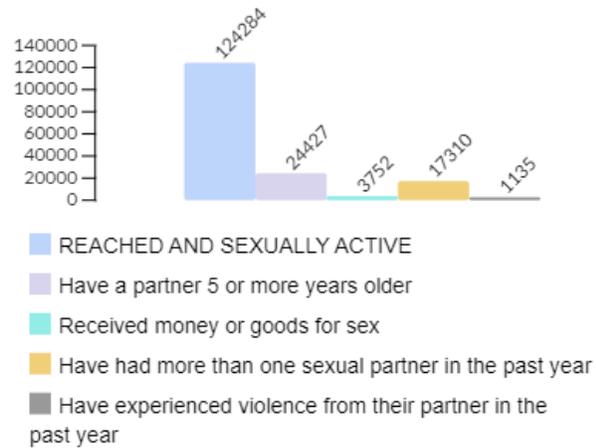


Figure H and J: Number of AGYW reached by the core package of services who reported that they were sexually active (ever had sex) in the risk assessment and that they: had a partner 5 or more years older, received money or goods for sex, had more than one sexual partner in the past year or had experienced violence from their partner in the past year in 19) Year 1 (Y1) and 20) Year 2 (Y2) of the programme

Discussion

The record review component of the process evaluation evaluated the routine monitoring data, from the “My Hope” system, of all beneficiaries reached by the core and biomedical services in the first two years of the programme (01 April 2019 – 31 March 2021). We have highlighted below where the record review brought out distinct information that conflicted with, was inconsistent with, or helped explain the results from the other evaluation components. While the objectives of the record review could not be fully addressed in this report due to data challenges, which are discussed in the limitations section, this report provides valuable insights into the AGYW programme.

Coverage of core services by time, age, district, occupation, school status and gender

The number of AGYW reached with core services was substantially higher in Y2 of the programme compared to Y1. As we have highlighted in the four other component reports of the process evaluation, interventions were still being set up in the first year of the programme and thus it is not surprising that coverage was lower in the first year of the grant period. Findings from this record review show that a higher percentage of the annual target was reached in Y2 of the programme compared to Y1, despite

challenges imposed by the COVID-19 pandemic. These results are promising for year three of the programme.

For both Y1 and Y2 of the programme, there were more AGYW reached in the 15 to 19 year age group, compared to the 20 to 24 year age group. Similarly, there were more AGYW reached in school than out of school. The higher proportion of AGYW reached in the 15 to 19 year age group and in school may be because schools were willing to work with sub-recipients (SRs) of the programme to facilitate the programme. However, the qualitative report of this process evaluation highlighted challenges in reaching AGYW in school due to school closures during the COVID-19 lockdown and prioritisation of schoolwork over extra-curricular programmes when schools resumed, which may explain the decrease in the percentage of AGYW reached in school from Y1 to Y2.

The occupation category “not in education, employment or training” (NEET) was the most commonly listed occupation of AGYW in the older age group (20-24 years), and the second most common occupation of AGYW in the younger age group (15-19 years), suggesting that the programme has been reaching individuals most in need of HIV-prevention services. Women in the NEET category may be at a higher risk of HIV infection because they may have less agency in sexual partnerships and when negotiating condom use as they are in an unfavourable economic position due to unemployment.

AGYW between the ages of 15 and 24 years, inclusive of females, transgender men, and transgender women, were the target group of the intervention. From the record review results, the programme successfully reached AGYW in their target group as beneficiaries were overwhelmingly female for the first two years of the programme. Nevertheless, men were not turned away from the programme if they wanted to participate and thus a few hundred men were reached with core services in Y1 and Y2 of the programme. Boys and men can also benefit from the programme by receiving HIV testing services, ART or PrEP referrals, and information on safe sex practices, which could ultimately benefit AGYW as their sexual partners. Specific recommendations related to boys and men are provided in the Overview and Recommendations report which accompanies this Record Review Report.

In terms of the impact of the COVID-19 pandemic, the number of AGYW reached decreased in the three months after the lockdown started, on the 27th of March 2020. However, after the initial three months of lockdown, the number of AGYW reached per quarter began to increase again. Nevertheless, this does not mean that the pandemic did not continue to impact the programme. SRs had difficulties in reaching

beneficiaries and AGYW faced challenges in accessing biomedical services such as HIV testing, ART, and PrEP.

Coverage of key biomedical services

The number of AGYW who were tested for HIV through biomedical services increased substantially from Y1 to Y2 of the programme. Only 1% of AGYW who received HIV testing were newly diagnosed with HIV in Y1 and Y2. Linkage to care targets for the programme were based on a 5% positivity yield assumption for new diagnoses. This suggests that programme had difficulties in finding HIV-positive AGYW. However, the total number of HIV-positive AGYW reached with biomedical services increased from 1% to 2% from Y1 to Y2. In the AGYW survey, 4% of participants were HIV-positive and all of them self-reported that they were on ART at the time of the survey.

Unfortunately, we do not have reliable data from the record review to show the proportion of HIV-positive AGYW who were referred for ART and linked to care because AGYW often failed to report back to SRs on whether they received the services for which they were referred. Furthermore, the information system to capture linkage to HIV care was limited. However, we can see that the number of HIV-positive AGYW who were already on ART increased from Y1 to Y2 of the programme. This could be because referral pathways for ART were not fully implemented in the first year of the programme. Challenges from the COVID-19 pandemic were reported in the AGYW survey and qualitative report to have affected access to medications in the second year of the programme.

While the majority of beneficiaries of the AGYW programme were between the ages of 15 and 19 years, and in school, most of the new HIV infections were among AGYW who were NEET or had an unknown occupation. This reinforces the notion that AGYW who are NEET are at a higher risk for HIV, thus it is positive that most of the AGYW reached by core services in the older age group, were NEET.

In terms of PrEP coverage, only several hundred AGYW were newly initiated on PrEP in Y1 of the programme and even fewer were already using PrEP while there were many more AGYW initiated on PrEP and already using PrEP in Y2 of the programme. The low coverage of PrEP initiation in Y1 may be because PrEP had not been fully implemented in the first year of the programme and there were medication stock-outs. There may also have been challenges in adhering to PrEP in Y2 of the programme due to the COVID-19 lockdown which were highlighted in the AGYW survey and qualitative reports. However, we do not have reliable data on retention of AGYW on PrEP care because of challenges in capturing this indicator on the “My Hope” system and lack of follow up from AGYW about their adherence to PrEP. The number of

AGYW already using PrEP was higher in the older age group, suggesting that the programme should place special attention on the effective use of PrEP among adolescent girls.

Coverage of core services by sexual behaviour and HIV risk

Sexual intercourse between men and women is the primary mode of HIV transmission in South Africa (1). Furthermore, age-disparate sexual relationships between AGYW and older men known as “blessers”, who provide AGYWs with money or goods, increase infection among this vulnerable group (2). Having multiple sexual partners, relationships with older men or engaging in transactional sex can increase AGYW’s risk of HIV infection if condoms are not used effectively or if the behaviour puts AGYW in a position where it is difficult to negotiate condom use.

The percentage of AGYW beneficiaries who had ever had sex and had a partner 5 or more years older, had had more than one sexual partner in the past year or received money or goods for sex (transactional sex), was lower in the record review compared to the AGYW survey. This could be because information about sexual behaviour from the record review is derived from the risk assessment component of the core package of services. We have highlighted in our qualitative report that AGYW felt uncomfortable during the risk assessment because some of the questions were of a very personal and sensitive nature. In addition, fieldworkers conducting the assessments in many cases were not adequately trained to ask such questions and did not have the opportunity to develop a rapport with AGYW before asking these questions. Thus, AGYW may have been less likely to disclose information about sexual behaviours. These findings, corroborating findings from the other study components, emphasise issues with accurate and honest self-reporting of sexual behaviours during the risk assessment, and that AGYW did not feel comfortable disclosing sexual and risk behaviours. However, it should be noted that the AGYW survey respondents may not have been representative of the population of programme beneficiaries, given the sample realization challenges in the survey.

There were fewer AGYW who reported that they had experienced violence from their partner in the past year in Y2 of the programme compared to Y1. This is surprising as findings from the AGYW survey report and other published research found that AGYW reported more violence in their home and many AGYW were more worried about being physically, emotionally, or sexually abused because of COVID-19 and the lockdown (3). However, we did not measure intimate partner violence in the AGYW survey specifically, so we are unable to compare estimates between the record review and the survey. It is also possible that accurate reporting of violence was undermined during risk assessments because of lack of privacy due to circumstances related to the lockdown.

In terms of effective condom use, findings from the record review show that 61% of AGYW in Y1 and 64% of AGYW in Y2 reported that they used condoms every time they had sex in the younger age group while in the older age group, 52% of AGYW in Y1 and 58% of AGYW in Y2 reported that they used condoms every time they had sex. Findings from the AGYW survey found that effective use of condoms was much lower; 23% in the younger age group and 20% in the older age group. The discrepancy in results between the AGYW survey and the record review may again be because AGYW did not feel comfortable to disclose their condom use during the risk assessment, because the criteria for effective condom use was more stringent in the AGYW survey, or due to selection bias in the AGYW survey.

Effective condom use was lower among AGYW who engaged in transactional sex in both the younger and older age group compared to beneficiaries in the broader population of AGYW who are sexually active, which may include AGYW who engaged in transactional sex or did not. These findings are similar to those of the AGYW survey which found that fewer AGYW who engaged in transactional sex were effectively using condoms compared to those who did not report transactional sex. Both these findings suggest that AGYW's risks and vulnerabilities may not have been effectively assessed during the risk assessment otherwise AGYW who engage in transactional sex would have been identified during the risk assessment and received information and education about effective condom use. This links with the earlier point regarding challenges with accurate self-reporting of risk behaviours by AGYW during the risk assessment. We have made recommendations for how to address this challenge in the accompanying Overview and Recommendations report.

In terms of pregnancy and childbirth, 22% of AGYW who were reached by core services had ever been pregnant and 88% of AGYW who had every been pregnant had children. This implies that 12% of pregnancies among AGYW beneficiaries of the programme ended in miscarriage, neonatal mortality, terminated pregnancy or infant mortality.

Study strengths and limitations

A key limitation of conducting the study in the context of the COVID-19 epidemic is that the results will not reflect the true potential of the intervention. The efficient delivery and coverage of the package of relevant interventions and services has likely been undermined by the lockdown. The record review was designed to evaluate implementation over time from the beginning of the grant period, and the findings have the potential to show the impact of lockdown on implementation and coverage. However, in the first year of the programme, implementation only began in September 2019 and some of the layered

services were not yet available and therefore the first year also does not reflect the true potential of the intervention.

Another major limitation to this study was data capturing. Due to challenges with biometric verification on the “My Hope” system, many SRs had to capture data on paper and manually enter the data into the system, leaving significant room for human error, misplaced hard copies and a large backlog of data. Information about layered services was only available for AGYW referred for biomedical services such as HIV testing, ART and PrEP due to issues with the service plan indicators and even then, the information was limited. Key biomedical indicators such as linkage to ART and retention on PrEP were not available for this report because results were unreliable and incomplete, as beneficiaries did not always report back to SRs if they had successfully received these services for the information to be captured on the system.

The strengths of the record review are that it provides useful insights on coverage of the programme with core services as well as the age, gender, occupation, school status and sexual behaviours of the beneficiaries reached. While we can infer information from the sample of AGYW who participated in the AGYW survey and qualitative interviews, the record review provides information on all beneficiaries of the programme and is not subject to selection bias.

Introduction

From 2016 to the present day, the Global Fund to Fight AIDS, TB and Malaria has invested in a combination intervention for adolescent girls and young women in South Africa, with the aim of reducing HIV incidence, teenage pregnancy, and gender-based violence and increasing retention access to economic opportunities. Combination HIV prevention interventions, which merge effective biomedical, behavioural and structural interventions for combined delivery, are one of the key strategies for reaching the 90-90-90 targets and achieving the Sustainable Development Goal (SDG) of ending the HIV epidemic by 2030 (4). The combination intervention was aligned with the She Conquers Campaign (5), and the South African National Strategic Plan for HIV, STI's and TB (2017-2022) (<https://sanac.org.za/download-the-full-version-of-the-national-strategic-plan-for-hiv-tb-and-stis-2017-2022-2/>), which recommends for AGYW “comprehensive package of high-impact, context-tailored and carefully targeted combination prevention interventions ... in all districts”.

We conducted a process evaluation of the combination HIV prevention intervention for AGYW aged 15 to 24 years which was being implemented in 11 South African districts (12 sub-districts) during the Global Fund Grant period 2019 to 2022. The process evaluation was requested by the South African National AIDS Council (SANAC), the body which oversees the combination HIV prevention intervention; by representatives for the Global Fund to Fight AIDS, TB and Malaria which fund the intervention; and by the principal recipients (PRs) of Global Funding who are South African non-government organisations (NGOs) responsible for implementing the combination HIV prevention intervention.

AGYW combination intervention implemented in the Global Fund grant period 2019 to 2022

During the 2019-2022 Global Fund Grant period, the AGYW's programme aimed to increase retention in school, decrease HIV incidence, decrease teenage pregnancy, decrease gender-based violence and increase economic opportunities. The implementation of the programme was the responsibility of three Principal Recipients (PRs): AIDS Foundation of South Africa (AFSA), Beyond Zero, and Networking AIDS Community of Southern Africa (NACOSA). The PRs sub-contracted sub-recipients (SRs) to implement the intervention components.

AGYW were introduced to the intervention through a number of entry points and referred to receive services via two main service components called the *Core Service* (which were received first) and *Layered Services* (which were additional services depending on the needs of the beneficiary, and which were received over time). In some cases, AGYW were first enrolled into the programme through layered

services. The AGYW programme implementers monitored and recorded the provision of core and layered services for each individual AGYW beneficiary, using an electronic monitoring system called the “My Hope” system.

Core and layered services were delivered by funded SRs in schools, TVET colleges, dedicated safe spaces in communities, and mobile clinics that delivered clinical HIV and SRH related services. Layered services were categorised into biomedical, behavioural and structural services. In addition to delivery of layered services by SRs, some layered services were delivered by unfunded external service providers such as government health, education or social development providers, in their own settings via referrals from the funded SRs. The approach of the AGYW programme was to leverage these existing services rather than set up parallel and less sustainable services.

The intervention was designed and conceptualized according to a theory of change model which was built on the assumption that “**IF** adolescent girls and young women are identified through various entry points (in schools, communities through NGOs, churches, public spaces and higher education institution through TVET colleges) and have their risks and vulnerabilities assessed and, **IF** AGYW are linked to biomedical, behavioural and structural HIV prevention interventions, **THEN** that may lead to positive health and behavioural outcomes, that, in turn should lead to reductions in new HIV infection among this group, **IF** programmatic, financial and political assumptions hold true” (extracted from AGYW Programme Description). The core and layered components of the AGYW programme, as well as the theory of change for the programme, are described in more detail in the overview of the HERStory 2 Process Evaluation which accompanies this report.

Process evaluations of complex interventions

Process evaluations investigate how and why an intervention works or does not work, and are often done in the context of a trial or outcome evaluation (6). They aim to elucidate and explain the reasons for an intervention working. Process evaluations will usually assess fidelity (whether the intervention was implemented as intended) and dose (quantity of the intervention implemented) (7). It is important to base process evaluations on the explicit causal assumptions about how the intervention in question will work, such as those described in the theory of change. The AGYW combination intervention is a complex intervention as it has several interacting components and targets multiple organizational levels. Because complex interventions are often tailored during implementation, it is important to capture what happens in practice, with reference to the theorized model. However, process evaluations are limited because they can only capture information from a point in time and thus cannot account for all adaptations to the

intervention. Furthermore, the context in which the intervention is delivered may undermine or promote implementation and intervention effects, and thus studying the context is an important part of a process evaluation of a complex intervention.

Process evaluations also commonly investigate the “reach” or “coverage” of the interventions (whether the intended beneficiaries come into contact with the intervention and how, and why did they participate or decline to participate) (7). The record review described in this report is one component of a multi-component process evaluation, conducted by investigators at the South African Medical Research Council. This record review evaluates routine programme monitoring data from the “My Hope” system for all beneficiaries of the AGYW programme, to determine whether coverage of the intervention is aligned to programme targets. It also investigates whether coverage was aligned to the theory of change, meaning that beneficiaries received the services that they needed, based on the risk assessment, leading to positive health outcomes.

Evaluating progress towards effective coverage

The concept of “effective coverage” refers to the proportion of a population in need of a service that experience a positive health outcome from the service (8). To achieve effective coverage of the AGYW combination intervention, AGYW who need the relevant service or intervention component should obtain it in a timely manner and at a level of quality necessary to achieving the desired effect and potential health gains (8). Effective coverage can be measured using health service coverage cascades applied to a clearly defined target population, for example AGYW with a specific health need, and including successive measures of contact with the health service/intervention, readiness of health service/intervention to deliver the service, receipt of appropriate and timely care, user-adherence, user-experience of care, disease control or prevention, well-being, health and survival (8). In a process evaluation, it is important to consider barriers to intervention coverage and the extent to which steps in the coverage cascades are met, as these comprise the causal assumptions underlying effective coverage.

The COVID-19 pandemic

In South Africa, in response to the COVID-19 pandemic, a lockdown was initiated on the 27th of March 2020 permitting only essential services to continue functioning. Schools, universities and colleges were closed. Some lockdown restrictions were subsequently lifted and then later re-imposed with the second wave of the epidemic in South Africa. The lockdown has affected the implementation of the AGYW’s intervention, undermining AGYW’s access to the core and layered interventions. People whose human rights are least protected, such as women and adolescents (and marginalized groups) are likely to be

disproportionately affected by the devastating economic and social consequences of the COVID-19 pandemic (9). Thus, the pandemic is likely to have adversely affected the health and well-being of South African AGYW, and their access to health services, education, and social protection and other services. This will have affected those AGYW living in the intervention districts. This record review will describe coverage of the AGYW programme before and after the lockdown to examine the impact of the COVID-19 lockdown on the programme.

The HERStory Process Evaluation aims and the record review objectives

Overall aim of the HERStory Process Evaluation

Informed by the Medical Research Council guidance on process evaluation of complex interventions (7), and informed by the guidance on evaluating service coverage cascades, we conducted a process evaluation of the AGYW combination intervention. The aim was to assess whether the selected health and educational interventions for AGYW, based on the theory of change, were being implemented as planned and whether the implementers were on a trajectory to achieve the desired outcomes. The specific objectives that relate to the review of the routine programme monitoring data are described below.

Objectives

This record review sought to answer the following questions and included the following objectives:

- d) Is the **coverage** of the intervention aligned to the targets for programmatic coverage, according to age and geography?
- e) Is the **coverage** of the intervention aligned to the theory of change? Here we focused on selected indicators of service/intervention coverage for beneficiaries in need of these services/interventions.
- f) To describe intervention **coverage** by age, occupation, sexual behaviour (as an indicator of HIV risk), district and time (before and after COVID-19).

Study design

In the overall evaluation, we conducted a mixed-method (quantitative and qualitative) study comprising various methods. The record review was one of five evaluation components. For the record review, we conducted a quantitative analysis of routine programme monitoring data. We reviewed all the records from the 11 intervention districts (12 sub-districts) that were available at the time of analysis (June 2021).

Record review methods

A team of consultants at Zenysis were contracted by NACOSA to compile the programme records on their platform, in a format that complied to specifications given by NACOSA. The SAMRC investigators were given access to this platform to conduct a record review using all the available programme monitoring data. We used this data to describe the number of beneficiaries who were reached by the core package

of services over the two-year grant period from the start of the programme, 1st of April 2019, to the end of the second year, 31st of March 2021, stratified by time, age, district, gender, school status and occupation. However, implementation of the programme only began in September 2019. Using data on AGYW who were enrolled into the programme through biomedical services, a component of the layered services, we assessed whether AGYW had a record of being tested for HIV and receiving PrEP or ART depending on their HIV status. We also described coverage by reported sexual behaviour using data from the risk assessment component of the core services.

Data sources and processing

The AGYW programme implementers monitored and recorded the provision of core and layered services for each individual AGYW beneficiary, using an electronic monitoring system called the “My Hope” system, with a paper-based back-up system where necessary. Through this system, it is possible to monitor an individual AGYW’s receipt of core and layered services (including biomedical, structural and behavioural layered services) across the intervention areas. This system is used by implementers at all points at which AGYWs are registered into the intervention, and in all settings.

The forms used to capture routine data by the implementers included an Enrolment Form with which a beneficiary was registered (Appendix A: Enrolment Form), a Core Package of Services Form which included the risk assessment (Appendix B: Core Package of Services), and a Service Plan Form which described the relevant layered services for the AGYW (Appendix C: Service Plan). In addition to these forms, there was a Biomedical Form that captured all the biomedical services offered by the programme. There were also Referral forms which were completed when AGYW were referred for services.

The data cleaning and sorting was performed by a sub-contractor called E-software (ES3). All data were anonymized so that none of the AGYW beneficiaries could be identified. The records from the programme monitoring system were checked for logical inconsistencies, data entry errors, outliers, and missing values. If any data queries arose, ES3 attempted to resolve the queries with the programme implementers. If the query could not be rectified, the field/observation was marked as “missing”. Missing data was expected for some variables, particularly if a beneficiary was not retained in the programme. ES3 maintains and stores the programme data in their database.

Zenysis reviewed all the available AGYW records from the data sources mentioned above and created indicators for the coverage of core and layered services as well as AGYW characteristics. Zenysis pulled the data from the ES3 database to create these indicators which were defined in a SQL script. The SQL script was sent to engineers at Zenysis who ran it through a data pipeline that harnessed the data and put it in the correct format so that users could make real time queries. Once the pipeline had run, then all the indicators were available on the Zenysis online data dashboard platform which allows users to visualize the different indicators and AGYW characteristics. We used this online platform to create the dashboard: “MRC RECORD REVIEW FOR JUNE 2020 REPORT”, which helps illustrate the objectives of the record review. All the figures from the online dashboard were downloaded on the 22nd June 2021 and can be found in the results section of this report. Access to the online dashboard can be facilitated through Zenysis.

Coverage of core services by time, age, district, occupation, school status and gender

First, we described the number of AGYW beneficiaries who were reached by the core package of services in year one (Y1: 01 April 2019 – 31 March 2020) and year two (Y2: 01 April 2020 – 31 March 2021), comparing to programme targets. Second, we explored coverage by age group, district, gender (all genders), school status and “occupation” (in school, education, employment or not in education, employment or training (NEET)). When stratifying by gender, we looked at all beneficiaries of the Global-Funded programme including boys and men. However, we only included AGYW beneficiaries between the ages of 15 and 24 in all other figures in this report. Lastly, we explored coverage per quarter before and after the onset of the COVID-19 lockdown on the 27th of March 2020.

Coverage of key biomedical services

We assessed coverage of key biomedical services including HIV testing, PrEP and ART using data from AGYW who received biomedical services. However, biomedical data is not available for all beneficiaries reached by the programme. Most of the figures described in this section (Figure 12, 13, 15-18) were created in excel using data from the record review on the Zenysis platform due to a temporary issue with loading figures on the platform.

First, we described the number of AGYW who were tested for HIV and received their test results during the reporting period for Y1 and Y2, highlighting AGYW who were newly diagnosed as HIV-positive, already diagnosed as HIV-positive and on ART or already diagnosed as HIV-positive and not on ART. There was no indicator for AGYW who tested as HIV-negative. AGYW who were newly diagnosed as HIV-positive were

also stratified by occupation. Next, we described the number of AGYW newly initiated on PrEP and already using PrEP per grant year, comparing to annual targets and stratifying by age group.

Coverage of core services by sexual behaviour and HIV risk

Using data from the risk assessment component of the core package of services, we described AGYW's sexual behaviour and HIV risk. For AGYW who were reached by the core services and self-reported that they were sexually active (i.e. ever had sex), we described the number of AGYW engaging in different sexual behaviours including AGYW who had a partner five or more years older, received money or goods for sex (transactional sex), had more than one sexual partner in the past year or had experienced violence from their partner in the past year for Y1 and Y2 of the programme. We then assessed effective use of condoms among AGYW who were sexually active or had engaged in transaction sex by year. Among all AGYW beneficiaries, we looked at the number of AGYW who had ever been pregnant and who had children.

Ethics approval

The study was approved by the SAMRC Research Ethics Committee on 29 September 2020 (EC036-9/2020).

Results

Figures 1 to 25 describe coverage of the Global-Funded AGYW programme with core and biomedical services across all 11 districts. Y1 refers to the first year of the programme (01 April 2019 – 31 March 2020) and Y2 refers to the second year of the programme (01 April 2020 – 31 March 2021). Except for Figure 9 and 10, all figures include only AGYW who were reached in the 15 to 24 year age range.

Coverage of core services by time, age, district, occupation, school status and gender

Figures 1 to 11 describe coverage of core services by the programme, which means the number of AGYW reached with the core package of services, by age, district, occupation, school status and gender. These figures relate to Objective 1 of the record review which aims to determine whether coverage of the intervention aligns to the targets for programmatic coverage and to characterize the beneficiaries of the programme.

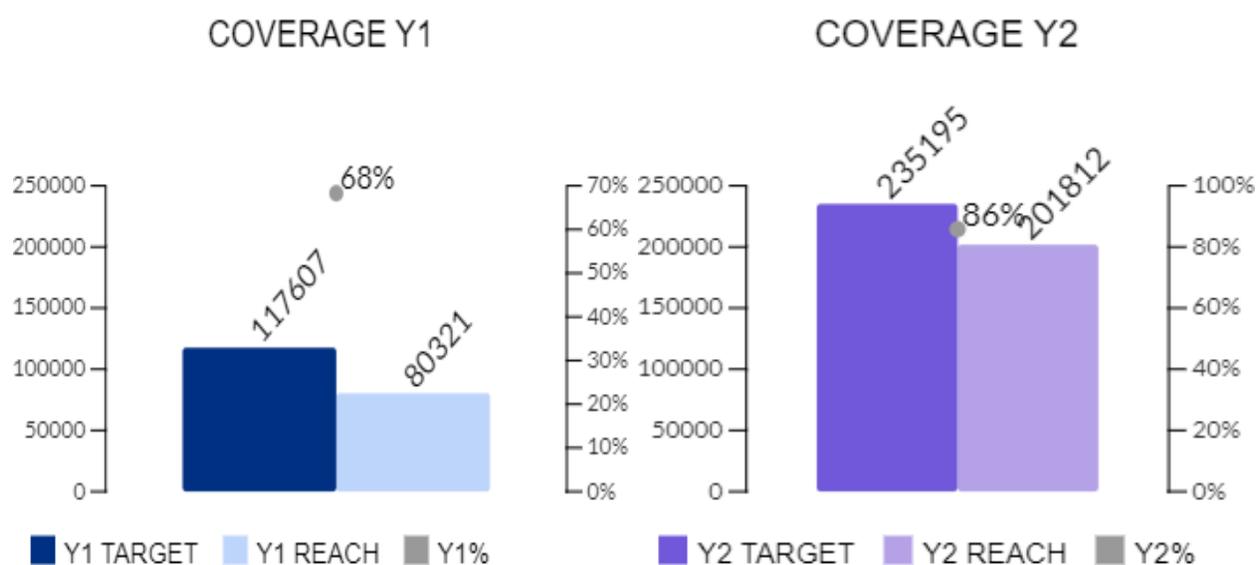
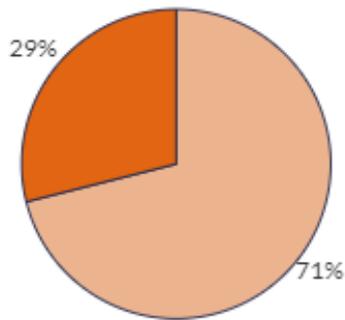


Figure 1 and 2: Number of AGYW reached with core services in 1) Year 1 (Y1) and 2) Year 2 (Y2) of the programme compared to annual targets

Figures 1 and 2 describe the number of AGYW reached with core services in Y1 and Y2 of the programme, compared to annual targets. The target for coverage with the core package of services was 117 607 AGYW in Y1 and 235 195 AGYW in Y2 of the AGYW programme. In Y1, a total of 80 321 AGYW were reached with core services and 68% of the target was met (Figure 1). In Y2, a total of 201 812 AGYW were reached and 86% of the target was met (Figure 2).

Most districts (10 out of 11) met at least 60% of their target in Y1 of the programme. In Y2 of the programme, 9 out of 11 districts met 60% or more of their target, with 6 of these districts meeting 90% of more of their target and 4 districts exceeding their target.

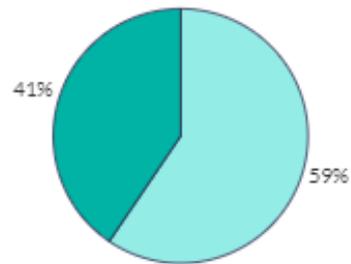
COVERAGE BY AGE GROUP Y1



Nation

Y1 REACH (15-19 years old)
Y1 REACH (20-24 years old)

COVERAGE BY AGE GROUP Y2



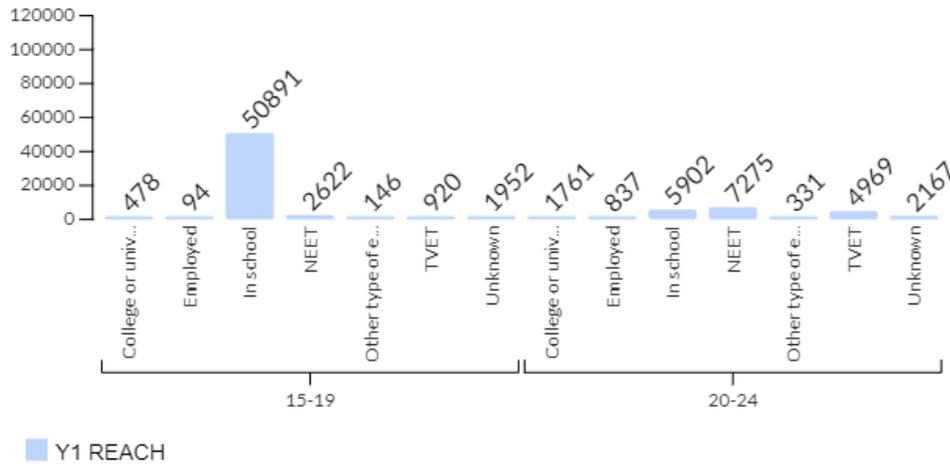
Nation

Y2 REACH (15-19 years old)
Y2 REACH (20-24 years old)

Figure 3 and 4: Percentage of all AGYW beneficiaries reached by the core services in 3) Year 1 (Y1) and 4) Year 2 (Y2) of the programme by age group

Figures 3 and 4 illustrate the percentage of all AGYW beneficiaries who were reached with core services in Y1 and Y2 of the programme, by age group. In Y1, 29% of all AGYW reached were in the 20 to 24 year age group and 71% were in the 15 to 19 year age group (Figure 3). In Y2, a higher percentage of AGYW reached were in the 20 to 24 year age group (41%) and a lower percentage were in the 15 to 19 year age group (59%) (Figure 4) compared to Y1 (Figure 3).

COVERAGE BY AGE GROUP AND OCCUPATION Y1



COVERAGE BY AGE GROUP AND OCCUPATION Y2

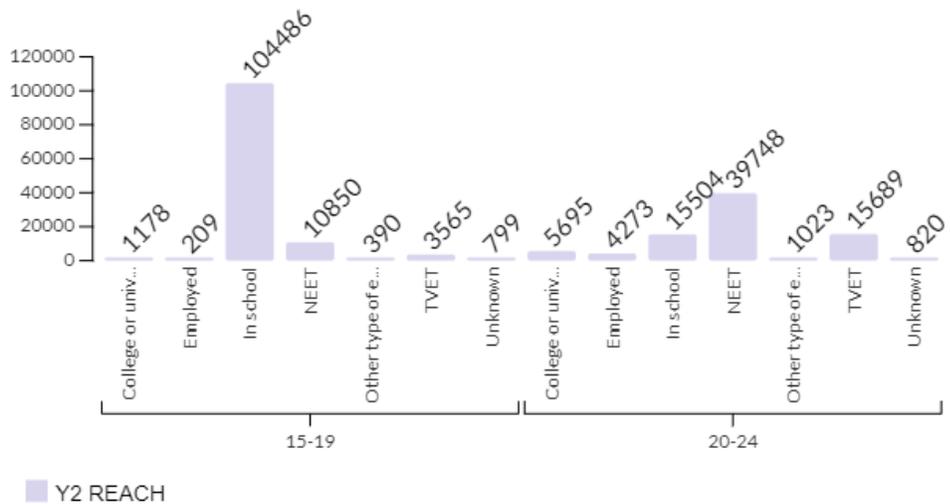


Figure 5 and 6: Number of AGYW reached with core services in 5) Year 1 (Y1) and 6) Year 2 (Y2) of the programme by age group and occupation

Figures 5 and 6 show the number of AGYW reached with core services in Y1 and Y2 of the programme, stratified first by age group and then by occupation. In both Y1 and Y2, the most common occupation of AGYW reached in the 15 to 19 year age group was to be in school (Y1: 50 891 AGYW; Y2: 104 486 AGYW) compared to the second most common “occupation” which was NEET (Y1: 2622; Y2: 10 850) (Figure 5). For Y1 and Y2, the most common occupation in the 20 to 24 year age group was NEET (Y1: 7275 AGYW;

Y2: 39 748 AGYW), compared to the second most common occupation which was to be in school (Y1: 5902 AGYW; Y2: 15 504 AGYW) or a TVET college (Y1: 4969; Y2: 15 689) (Figure 6).

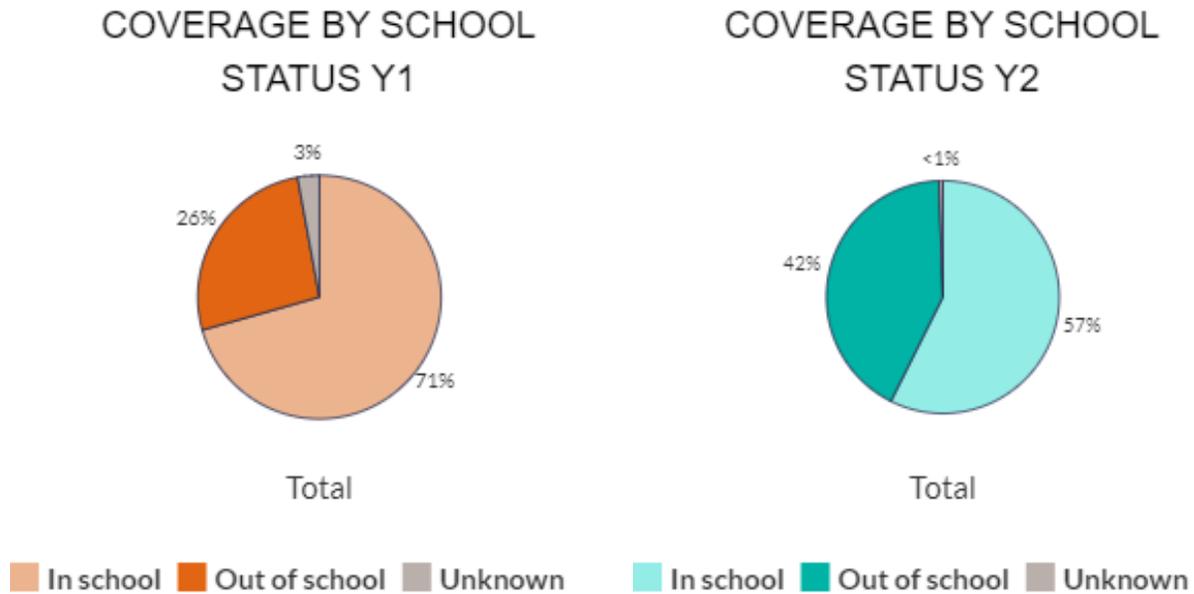
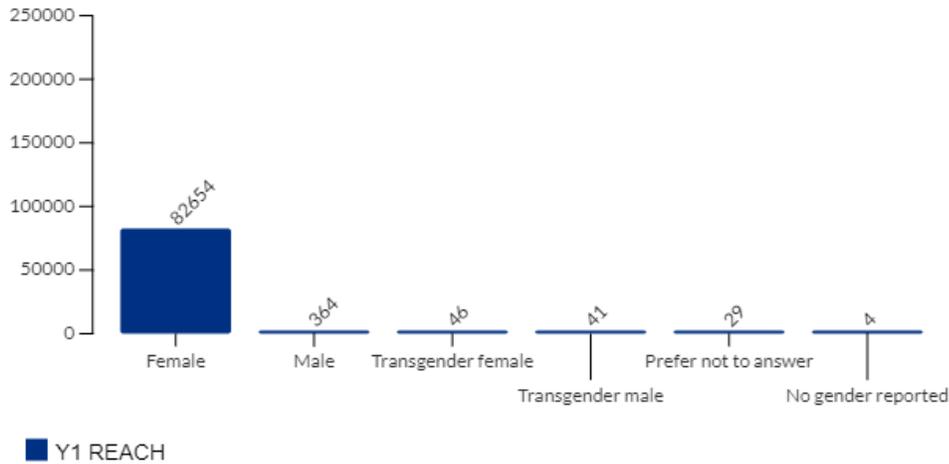


Figure 7 and 8: Percentage of all AGYW beneficiaries reached by the core services in 7) Year 1 (Y1) and 8) Year 2 (Y2) of the programme by school status

Figures 7 and 8 illustrate the percentage of all AGYW beneficiaries reached by the core package of services that are in school, out of school or have an unknown school status in Y1 and Y2 of the programme. For the first two years of the programme, the percentage of AGYW reached who were in school (Y1: 71%; Y2: 57%) is higher than the percentage of AGYW that were out of school (Y1: 26%; Y2: 42%). However, the percentage of AGYW reached that were out of school increased from 26% in Y1 (Figure 7) to 42% in Y2 (Figure 8).

COVERAGE BY GENDER Y1



COVERAGE BY GENDER Y2

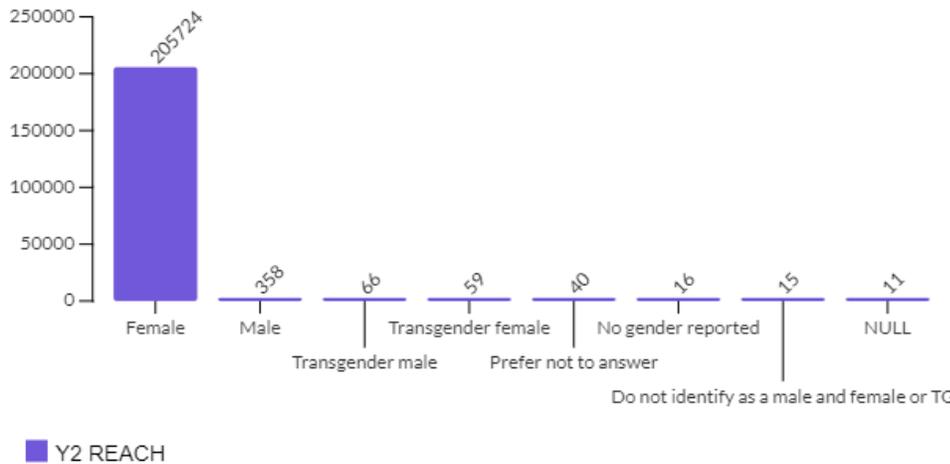


Figure 9 and 10: Number of beneficiaries reached with core services in 9) Year 1 (Y1) and 10) Year 2 (Y2) of the programme by gender

Figures 9 and 10 show the number of beneficiaries reached in Y1 and Y2 of the programme, by gender. These figures use a different indicator for coverage to the one used in the other figures in this report as it includes beneficiaries of all genders and ages who were reached by the programme thus total coverage by core services is higher in these figures. For both Y1 and Y2, female was the most common gender (99 – 100%) of the beneficiaries reached (Y1: 82 654 AGYW; Y1: 205 724 AGYW). There were 364 men reached

in Y1 and 358 men reached in Y2 of the programme. Fewer than 100 transgender men and women were reached in Y1 and in Y2.

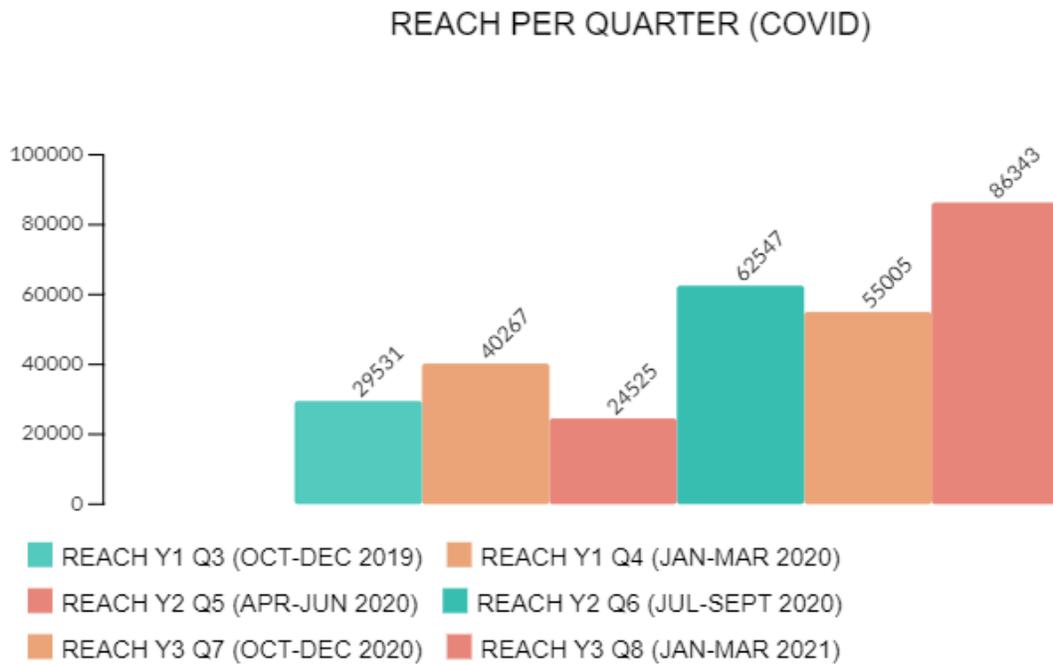


Figure 11: Number of AGYW reached with core services per quarter of the programme from 01 October 2019 to 31 March 2021

Figure 11 describes the number of AGYW reached with core services per quarter or three-month interval (bars reflecting quarters organised consecutively over time) from the 1st of October 2019 (first bar) through to the 31st of March 2021 (6th bar) which spans the period before and after the start of the COVID-19 lockdown (27 March 2020). As shown in Figure 11, the number of AGYW reached is higher in bar 2 (40 267 AGYW) which represents the three months preceding the lockdown (January to March 2020) compared to bar 3 (24 525 AGYW) which represents the three months after the start of the lockdown (April to June 2020). From July 2020 to March 2021 (bar 4 to 6), the number of AGYW reached per quarter ($\geq 55\ 005$ AGYW) began to increase to numbers higher than before the lockdown (bar 2) (40 267 AGYW).

Coverage of key biomedical services

Figures 12 to 18 describe the coverage of key biomedical services by the programme, including HIV testing, PrEP and ART initiation and retention. These findings relate to Objective 2 of the record review which is to determine whether coverage of the intervention is aligned to the theory of change and whether beneficiaries were receiving the services that they needed. Biomedical data is not available for all beneficiaries reached by the programme. Thus, this section only includes information on AGYW who received biomedical services, including HIV testing.

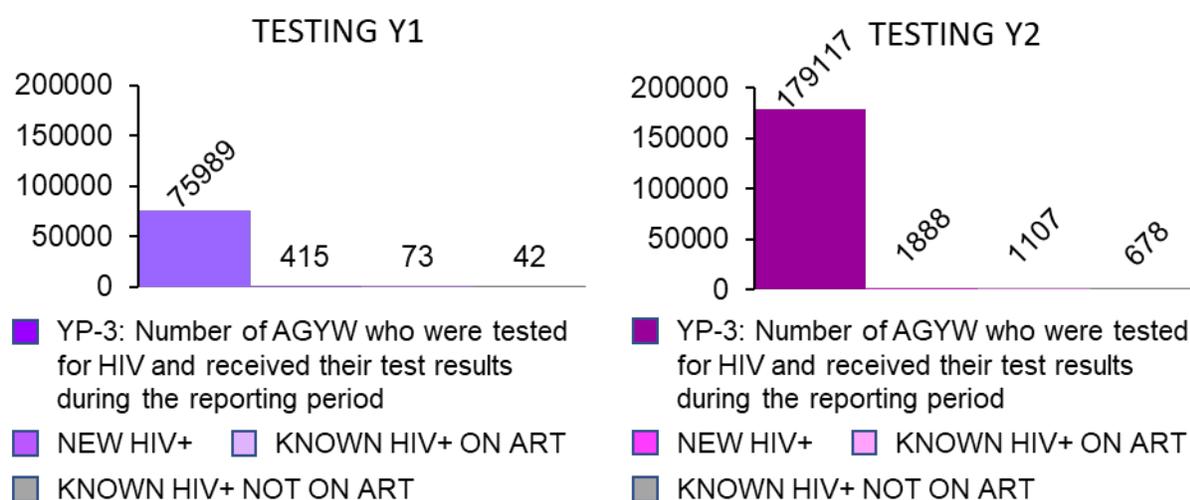


Figure 12 and 13: Number of AGYW who were tested for HIV and received their test results during the reporting period, were newly diagnosed as HIV-positive, were known HIV-positive on ART or were known HIV-positive not on ART in 12) Year 1 (Y1) and 13) Year 2 (Y2) of the programme

Figures 12 and 13 show the number of AGYW who were tested for HIV and received their test results during the reporting period, who were newly diagnosed as HIV-positive, who were known HIV-positive on ART or who were known HIV-positive not on ART, in Y1 and Y2 of the programme. The number of AGYW who were tested for HIV through biomedical services increased substantially from Y1 (75 989 AGYW) to Y2 (179 117 AGYW) of the programme (Figures D and E). The percentage of AGYW tested for HIV who were newly diagnosed with HIV was 1% in Y1 (415 AGYW) and 1% in Y2 (1888 AGYW). Linkage to care targets were based on a 5% positivity yield assumption for new diagnoses. However, finding HIV-positive AGYW appears to have been a challenge. The number of AGYW who were known HIV-positive on ART increased slightly from 73 in Y1 to 1107 in Y2. The number of tested AGYW who were known HIV-positive

not on ART was lower than known HIV-positive AGYW on ART in Y1 (42 AGYW) and Y2 (678 AGYW) of the programme. The total number of HIV-positive AGYW who were tested through biomedical services increased from 530 in Y1 (1%) to 3673 in Y2 (2%).

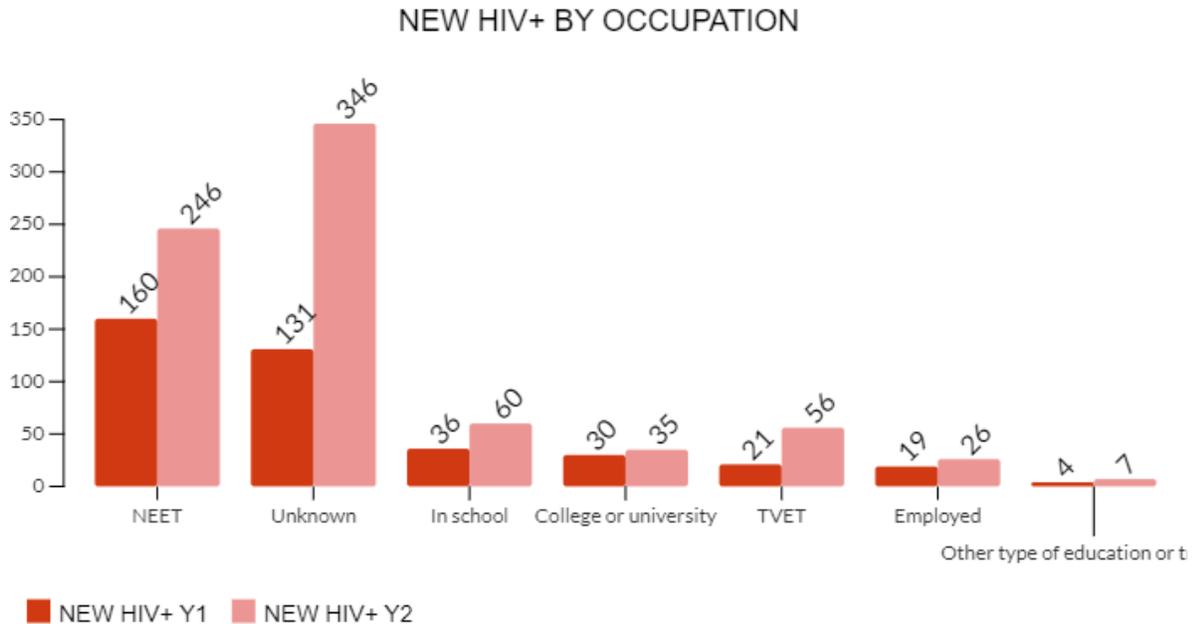


Figure 14: Number of AGYW who were tested for HIV and newly diagnosed as HIV-positive in Year 1 (Y1) and Year 2 (Y2) of the programme by occupation

Figure 14 describes the number of AGYW who were tested for HIV and newly diagnosed as HIV-positive in Y1 and Y2 of the programme by occupation. New HIV-positive diagnoses were most common among AGYW who were NEET (Y1: 160 AGYW; Y2: 246 AGYW) or had an unknown occupation (Y1: 131; Y2: 346) for Y1 and Y2 of the programme.

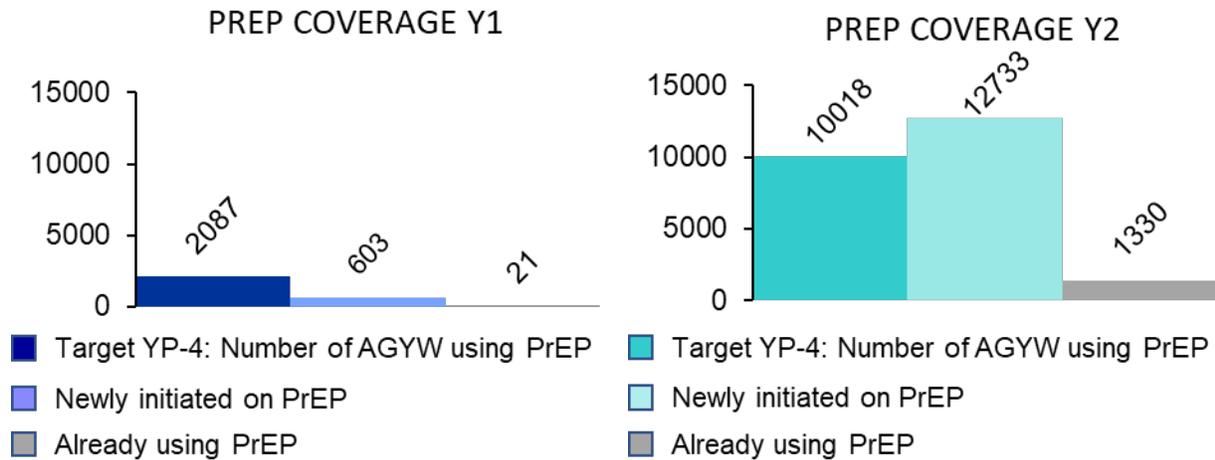


Figure 15 and 16: Number of AGYW newly initiated on PrEP and already using PrEP for 15) Year 1 (Y1) and 16) Year 2 (Y2) of the programme compared to targets

Figures 15 and 16 describe the number of AGYW newly initiated on PrEP and already using PrEP compared to the annual target which is represented by bar 1. In the first year of the programme, 603 AGYW were newly initiated on PrEP and 21 AGYW were already using PrEP while 12 733 AGYW were newly initiated on PrEP in the second year of the programme and 1330 were already using PrEP. While we do not have reliable data on the number of AGYW who were retained on PrEP due to suboptimal health information system functionality, we can see that the programme had the potential to meet 30% of the target set for PrEP use, based on the number of AGYW newly initiated on PrEP and already using PrEP in Y1, and 140% of the target set for PrEP use in Y2 of the programme.

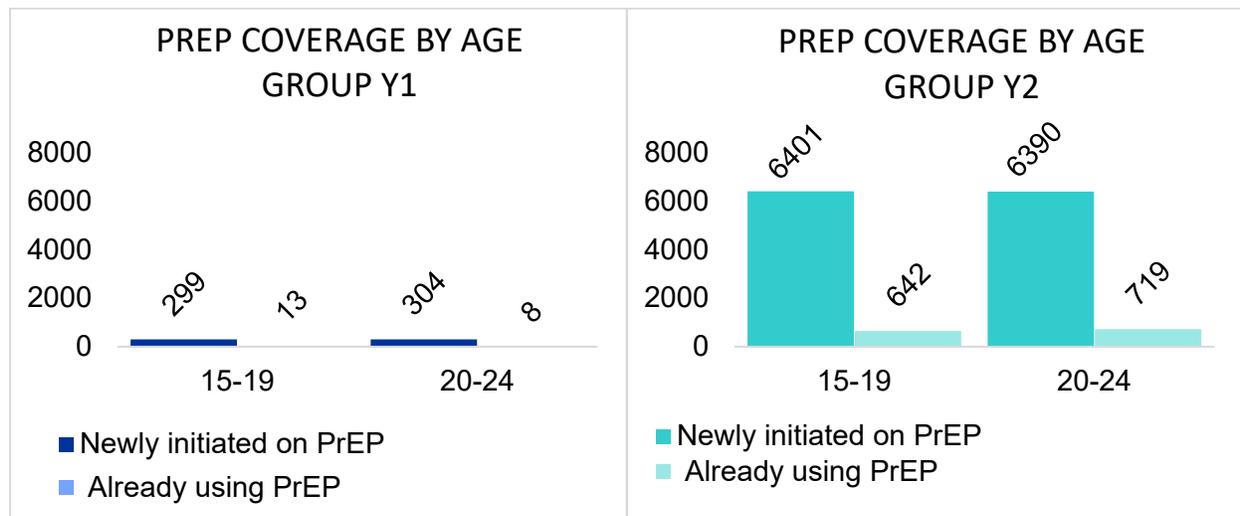


Figure 17 and 18: Number of AGYW newly initiated on PrEP and already using PrEP for 15) Year 1 (Y1) and 16) Year 2 (Y2) of the programme by age group

Figures 17 and 18 show the number of AGYW newly initiated on PrEP and already using PrEP for Y1 and Y2 of the programme by age group. When stratified by age, the number of AGYW newly initiated on PrEP and already using PrEP was very low for both age groups in Y1. In Y2, a similar number of AGYW were newly initiated on PrEP in the 15 to 19 year age group (6401 AGYW) compared to the 20 to 24 year age group (6390 AGYW). The number of AGYW already using PrEP (719 AGYW) was higher in the 20 to 24 year age group compared to the 15 to 19 year age group (642 AGYW).

Coverage of core services by sexual behaviour and HIV risk

Figures 19 to 25 describe the number of AGYW who were reached with the core package of services who reported various sexual behaviours during the risk assessment. These figures relate to Objective 3 of the record review which aims to describe coverage of core services by sexual behaviour as an indicator of HIV risk.

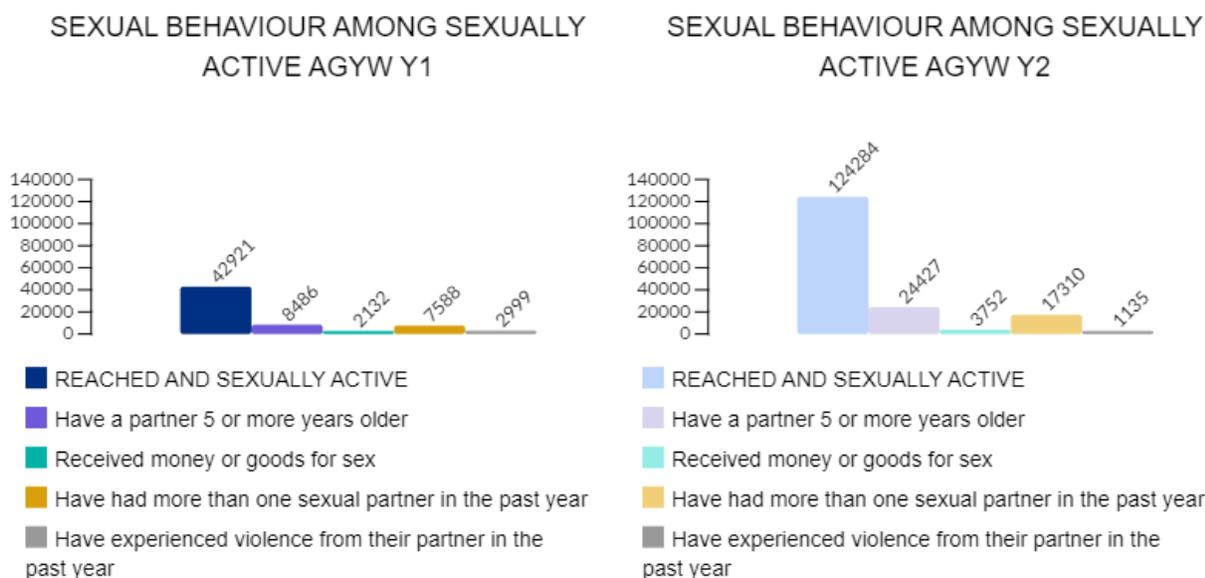


Figure 19 and 20: Number of AGYW reached by the core package of services who reported that they were sexually active (ever had sex) in the risk assessment and that they: have a partner 5 or more years older, received money or goods for sex, have had more than one sexual partner in the past year or have experienced violence from their partner in the past year in 19) Year 1 (Y1) and 20) Year 2 (Y2) of the programme

Figures 19 and 20 show the number of AGYW who were reached with core services and who reported that they were sexually active, meaning that they had reported ever having sex, in the risk assessment component of the core services in Y1 and Y2 of the programme (bar 1). In Y1, 53% of AGYW reported that

they were sexually active while in Y2, 62% of AGYW reported that they were sexually active (not shown). Bars 2 to 5 describe the number of sexually active AGYW who have a partner 5 or more years older, received money or goods for sex (transactional sex), have had more than one sexual partner in the past year or have experienced violence from their partner in the past year, respectively. While the number of sexually active AGYW reached is higher in Y2 (124 284 AGYW) compared to Y1 (42 921), the percentage of sexually active AGYW who have a partner 5 or more years older (Y1 and Y2: 20%), received money or goods for sex (Y1: 5%; Y2: 3%), have had more than one sexual partner in the past year (Y1: 18%; Y2: 14%) or have experienced violence from their partner in the past year (Y1: 7%; Y2: 1%) is similar for Y1 and Y2 of the programme.

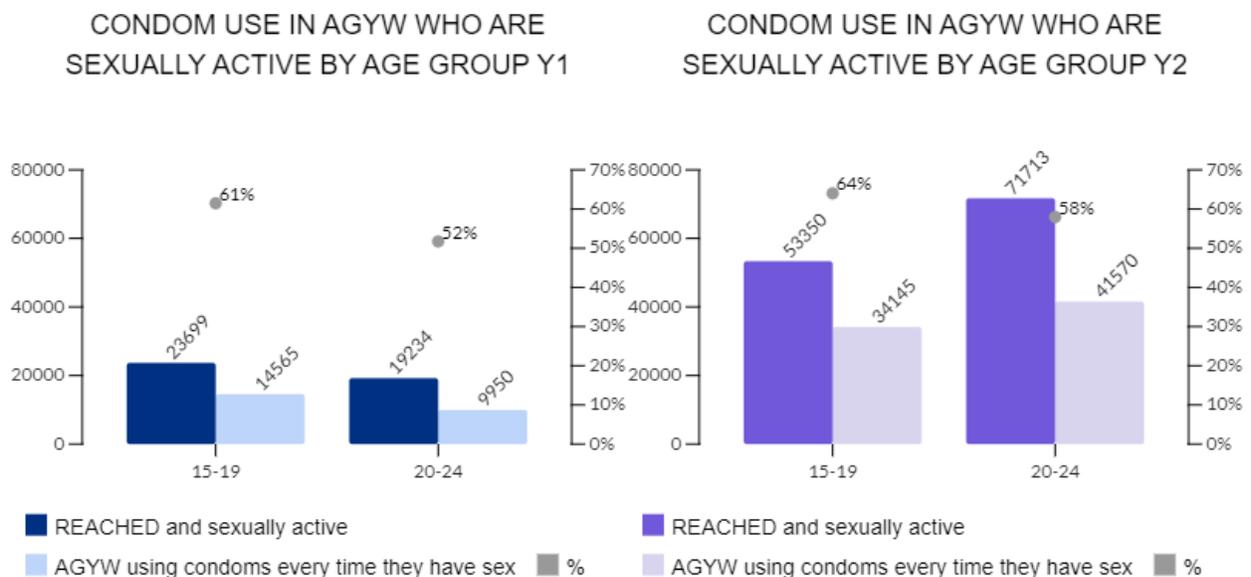


Figure 21 and 22: Number of AGYW reached by the core services who reported that they were sexually active (ever had sex) in the risk assessment and that they used condoms every time they had sex in 21) Year 1 (Y1) and 22) Year 2 (Y2) of the programme by age group

Figures 21 and 22 describe the number of AGYW reached by the core services, who reported that they were sexually active in the risk assessment (i.e. ever had sex) and that they used condoms every time they had sex, in Y1 and Y2 of the programme, by age group. In the 20 to 24 year age group, there was a lower percentage of sexually active AGYW who reported that they used condoms every time they had sex (Y1: 52%; Y2: 58%) compared to AGYW in the 15 to 19 year age group (Y1: 61%; Y2: 64%).

CONDOM USE IN AGYW ENGAGING IN TRANSACTIONAL SEX BY AGE GROUP Y1

CONDOM USE IN AGYW ENGAGING IN TRANSACTIONAL SEX BY AGE GROUP Y2

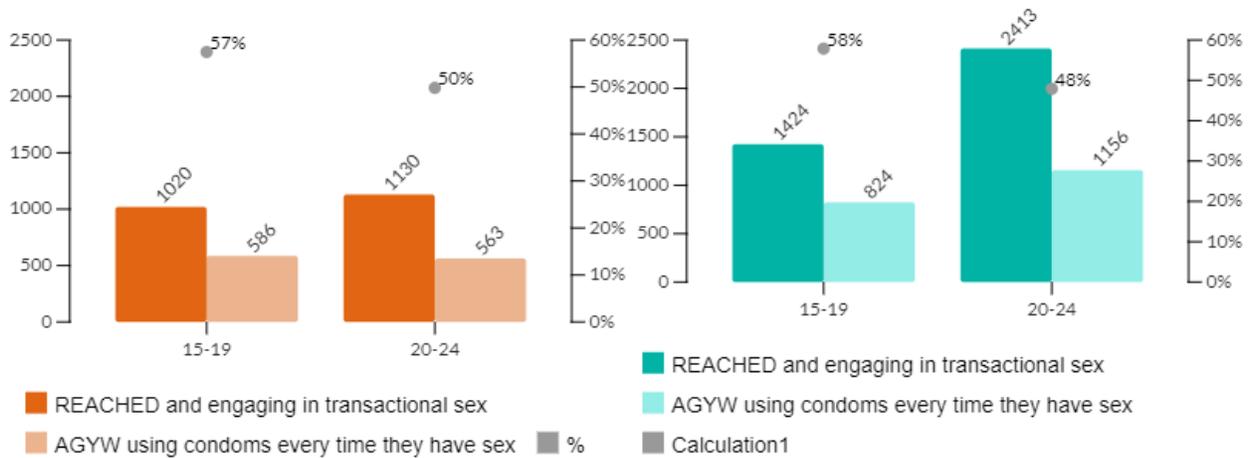


Figure 23 and 24: Number of AGYW reached by the core services who reported that they had engaged in transactional sex in the risk assessment and that they used condoms every time they had sex in 23) Year 1 (Y1) and 24) Year 2 (Y2) of the programme by age group

Figures 23 and 24 refer to AGYW reached by the core services, who reported that they had engaged in transactional sex in the risk assessment. The figures show the number of AGYW who reported that they used condoms every time they had sex by age group in Y1 (Figure 23) and Y2 (Figure 24) of the programme. Effective condom use was lower among AGYW in the 20 to 24 year age group (Y1: 50%; Y2: 48%) compared to AGYW in the 15 to 19 year age group (Y1: 57%; Y2: 58%). Effective condom use was lower among AGYW who engaged in transactional sex (Figures 23 and 24) compared to the broader population of AGYW who were sexually active, including AGYW who engaged in transactional sex and who did not (Figure 21 and 22).

AGYW WHO HAVE BEEN PREGNANT AND HAD CHILDREN

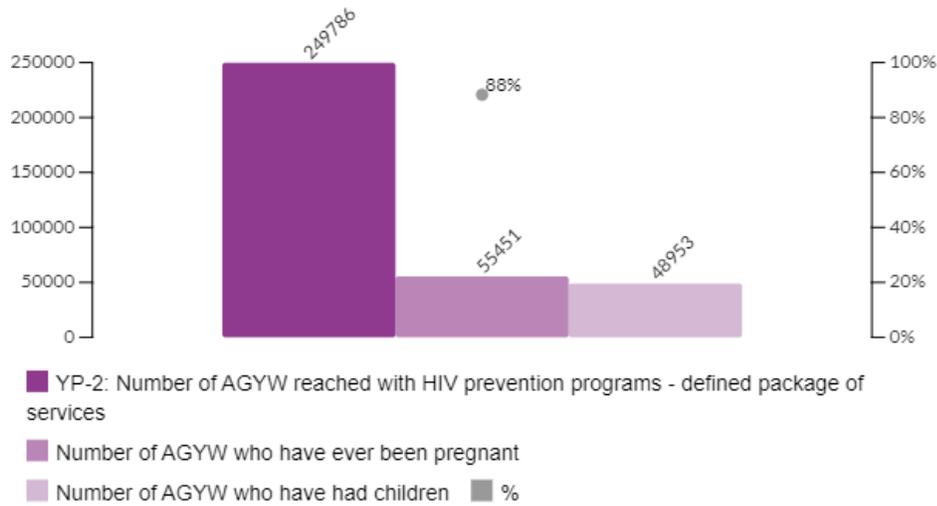


Figure 25: Number of AGYW reached with the core services of the programme who have ever been pregnant and had children

Figure 25 shows the number of AGYW reached with core services in the first two years of the programme who reported that they had ever been pregnant and had children. Of the 249 786 AGYW reached over the first two years of the programme, 22% had ever been pregnant. Of the 55 451 AGYW who had ever been pregnant, 88% now had children.

Discussion

The South African Medical Research Council conducted a process evaluation of the AGYW combination intervention delivered between 2019 and 2022 to assess whether the selected health and educational interventions for AGYW, based on the theory of change, were being implemented as planned and whether the implementers were on a trajectory to achieve the desired outcomes. The process evaluation was made up of five component reports. This report, the record review, evaluated the routine monitoring data, from the “My Hope” system, of all beneficiaries reached by the core and biomedical services in the first two years of the programme (01 April 2019 – 31 March 2021). We have highlighted below where the record review brought out distinct information that conflicted with, was inconsistent with, or helped explain the results from the other evaluation components.

Due to data challenges, we were unable to fully address the objectives of the record review. It was difficult to determine whether coverage of the intervention was aligned to the theory of change because data on referrals generally, including successful referrals for layered services, was particularly limited. The reasons for these data challenges are discussed in more detail in the limitations section of this report. Nevertheless, we have used the available data to address the objectives where possible and provide valuable insights into the AGYW programme.

Coverage of core services by time, age, district, occupation, school status and gender

The number of AGYW reached with core services was substantially higher in Y2 of the programme (01 April 2020 – 31 March 2021) compared to Y1 (01 April 2019 – 31 March 2020). As we have highlighted in the four other component reports of the process evaluation, interventions were still being set up in the first year of the programme and implementation only began in September 2019, thus it is not surprising that coverage was lower in the first year of the grant period. However, findings from this record review show that a higher percentage of the annual target was met in Y2 of the programme compared to Y1 (86% vs. 68%) despite higher targets in Y2 and challenges imposed by the COVID-19 pandemic. These results are promising for year three of the programme.

For both Y1 and Y2 of the programme, there were more AGYW reached in the 15 to 19 year age group, compared to the 20 to 24 year age group. Similarly, there were more AGYW reached in school than out of school. Most AGYW in the younger age group were still in school. The higher proportion of AGYW reached in the younger age group and in school may be because schools were willing to work with SRs to facilitate the programme, making it easier to enrol AGYW in schools. However, the qualitative report of this process

evaluation highlighted challenges in reaching AGYW in school due to school closures during the COVID-19 lockdown and prioritisation of schoolwork over extra-curricular programmes when schools resumed which may explain the decrease in the percentage of AGYW reached in school from Y1 to Y2.

Not being in education, employment or training was the most common occupation of AGYW in the older age group and the second most common occupation of AGYW in the younger age group, suggesting that the programme has been reaching individuals most in need of HIV-prevention services. Women in the NEET category may be at a higher risk of HIV infection because they may have less agency in sexual partnerships and when negotiating condom use as they are in an unfavourable economic position due to unemployment. Furthermore, they do not have access to sexual and reproductive health education and services through their school or place of employment. The AGYW programme provides AGYW with HIV prevention education and services as part of the core services and can also refer AGYW for career development if the AGYW is identified as being in need of these services during the risk assessment.

AGYW between the ages of 15 and 24 which includes females, transgender men, and transgender women, were the target group of the intervention. From the record review results, the programme successfully reached AGYW in their target group as beneficiaries were overwhelmingly female (99 – 100%) for the first two years of the programme. Nevertheless, men were not turned away from the programme if they wanted to participate and thus a few hundred men were reached with core services in Y1 and Y2 of the programme. Boys and men can also benefit from the programme by receiving HIV testing services, ART or PrEP referrals, and information on safe sex practices, which could ultimately benefit AGYW as their sexual partners. Findings from the process evaluation recommend HIV risk-reduction counselling for boys and men as well as engaging boys and men in discussions about healthy notions of masculinity.

In terms of the impact of the COVID-19 pandemic, the number of AGYW reached decreased in the three months after the lockdown started, on the 27th of March 2020. However, after the initial three months of lockdown, the number of AGYW reached per quarter began to increase again. Nevertheless, this does not mean that the pandemic did not continue to impact the programme. In particular, we describe the challenges that AGYW faced in accessing biomedical services including HIV testing, contraceptives, PrEP, ART, and condoms in the qualitative and AGYW survey reports. In addition, fieldworkers attempted to contact AGYW at their homes either over the phone or in-person, where AGYW did not have privacy from their families, making it difficult for AGYW to participate in risk assessments or counselling services.

Coverage of key biomedical services

The number of AGYW who were tested for HIV through biomedical services increased substantially from Y1 to Y2 of the programme. Only 1% of AGYW who received HIV testing were newly diagnosed with HIV in Y1 and Y2. Linkage to care targets for the programme were based on a 5% positivity yield assumption for new diagnoses. This suggests that programme implementers had difficulties in finding HIV-positive AGYW. However, the total number of HIV-positive AGYW reached with biomedical services increased from 1% to 2% from Y1 to Y2. In the AGYW survey, 4% of participants were HIV-positive and all of them reported that they were on ART at the time of the survey.

Unfortunately, we do not have reliable data from the record review to show the proportion of HIV-positive AGYW who were referred for ART and linked to care because AGYWs often failed to report back to SRs on whether they received the services for which they were referred. However, we can see that the number of HIV-positive AGYW who were already on ART increased from Y1 to Y2 of the programme. This could be because referral pathways for ART were not fully implemented in the first year of the programme. Challenges from the COVID-19 pandemic may also have affected access to medications in the second year of the programme. According to results of the AGYW survey, 35% of AGYW said they could not access the medications they needed because of COVID-19 and the lockdown and one in four reported that they missed taking their ARV pills.

While the majority of beneficiaries of the AGYW programme were between the ages of 15 and 19 and in school, most of the new HIV infections were among AGYW who were NEET or had an unknown occupation. This reinforces the notion that AGYW who are NEET are at a higher risk for HIV, thus it is positive that most of the AGYW reached by core services in the older age group, were NEET.

In terms of PrEP coverage, only several hundred AGYW were newly initiated on PrEP in Y1 of the programme and even fewer were already using PrEP while there were many more AGYW initiated on PrEP and already using PrEP in Y2 of the programme. The low coverage of PrEP initiation in Y1 may be because PrEP had not been fully implemented in the first year of the programme and there were medication stock-outs. There may also have been challenges in adhering to PrEP in Y2 of the programme due to the COVID-19 lockdown which were highlighted in the AGYW survey and qualitative reports. However, we do not have reliable data on retention of AGYW on PrEP care because the “My Hope” system was initially unable to capture information on this indicator and there was limited follow up from AGYW about their adherence to PrEP.

Age may also be a factor in adherence to PrEP. In Y2 of the programme, a similar number of AGYW were newly initiated on PrEP in the 15 to 19 year age group compared to the 20 to 24 year age group. However, the number of AGYW already using PrEP was higher in the 20 to 24 year age group compared to the 15 to 19 year age group. When stratified by age, values from Y1 were too low to draw any meaningful conclusions. Findings from the AGYW survey also show an association between being in the older age group and access to PrEP which may influence the effective use of PrEP. These results suggest that the programme needs to improve access and effective use of PrEP among AGYW in the younger age group. Recommendations about improving the effective use of PrEP can be found in the recommendations report of the process evaluation.

Coverage of core services by sexual behaviour and HIV risk

Sexual intercourse between men and women is the primary mode of HIV transmission in South Africa (1). Furthermore, age-disparate sexual relationships between AGYW and older men known as “blessers”, who provide AGYWs with money or goods, increase infection among this vulnerable group (2). Having multiple sexual partners, relationships with older men or engaging in transactional sex can increase AGYW’s risk of HIV infection if condoms are not used effectively or if the behaviour puts AGYW in a position where it is difficult to negotiate condom use. This section describes the coverage of core services by sexual behaviour to see if the intervention reached women at a higher risk of HIV infection. Information on sexual behaviour was self-reported during the risk assessment component of the core package of services.

The percentage of AGYW who had ever had sex that have a partner 5 or more years older was 20% in Y1 and Y2 of the programme, that have had more than one sexual partner in the past year was 18% in Y1 and 14% in Y2, that received money or goods (transactional sex) for sex was 5% in Y1 and 3% in Y2, or that had experienced violence from their partner in the past year was 7% in Y1 and 1% in Y2. These findings are slightly lower than results among AGYW who had ever had sex in the AGYW survey which found that 22% of AGYW reported that they had a male partner that was 5 or more years older than them in the six months before the survey, 20% of AGYW had had more than one male partner in the six months before the survey, and 8% had engaged in transactional sex in the six months before the survey. This could be because information about sexual behaviour from the record review is from the risk assessment component of the core package of services. We have highlighted in our qualitative report that AGYW felt uncomfortable during the risk assessment because some of the questions were of a very personal and sensitive nature. In addition, fieldworkers conducting the assessments in many cases were not adequately trained to ask such questions, and did not have the opportunity to develop a rapport with AGYW before

asking these questions. Thus, AGYW may have been less likely to disclose information about sexual behaviours. Furthermore, many risk assessments had to be conducted telephonically or at AGYW's homes in Y2 because of the lockdown. This meant that beneficiaries did not have as much privacy when answering questions and may have been hesitant to answer certain questions if family members or partners were also at home. These findings emphasise that all data is now telling us that AGYW did not feel comfortable to disclose information about their sexual behaviours during the risk assessment. However, it should be noted that the AGYW survey respondents may not have been representative of the population of programme beneficiaries, given the sample realization challenges in the survey.

There were fewer AGYW who reported that they had experienced violence from their partner in the past year in Y2 of the programme (1%) compared to Y1 (7%). This is surprising as findings from the AGYW survey report and other published research found that AGYW reported more violence in their home and many AGYW were more worried about being physically, emotionally or sexually abused because of COVID-19 and the lockdown (3). However, we did not measure intimate partner violence in the AGYW survey specifically, so we are unable to compare estimates between the record review and the survey. It is also possible that accurate reporting of violence was undermined during risk assessments because of lack of privacy due to circumstances related to the lockdown.

In terms of effective condom use, findings from the record review show that the percentage of AGYW who used condoms every time they had sex was lower in the older age group (Y1: 52%; Y2: 58%) compared to the younger age group (Y1: 61%; Y2: 64%). In addition, findings from the AGYW survey found that effective use of condoms was much lower; 23% in the younger age group and 20% in the older age group. The discrepancy between ages in both sub-studies could be because women in the older age group are more likely to have a long-term partner who they trust or because adolescent girls (15 – 19 years old) were more susceptible to social desirability bias. The difference in results between the two sub-studies may be because AGYW did not feel comfortable to disclose their condom usage during the risk assessment, selection bias in the AGYW survey or because of the phrasing of the question on effective coverage. The AGYW survey used a very strict indicator for the effective use of condoms which asked AGYW to report the percentage of the time that they used condoms when having sex with their last two male partners. AGYW were identified as effectively using condoms if they had used condoms 90 – 100% of the time with their last two partners.

Effective condom use was lower among AGYW who engaged in transactional sex in both the younger and older age group compared to beneficiaries in the broader population of AGYW who are sexually active,

which would include AGYW who engaged in transactional sex or did not. These findings are similar to those of the AGYW survey which found that fewer AGYW who engaged in transactional sex were effectively using condoms compared to those who did not. Both these findings suggest that AGYW's risks and vulnerabilities may not have been effectively assessed during the risk assessment, otherwise AGYW who engage in transactional sex would have been identified during the risk assessment and received information and education about effective condom use. This suggests that the theory of change did not hold true for this aspect of the programme.

In terms of pregnancy and childbirth, 22% of AGYW who were reached by core services had ever been pregnant and 88% of AGYW who had ever been pregnant had children. This implies that 12% of pregnancies among AGYW beneficiaries of the programme ended in miscarriage, neonatal mortality, terminated pregnancy or infant mortality.

Study strengths and limitations

A key limitation of conducting the study in the context of the COVID-19 epidemic is that the results will not reflect the true potential of the intervention. The efficient delivery and coverage of the package of relevant interventions and services has likely been undermined by the lockdown. The record review was designed to evaluate implementation over time from the beginning of the grant period, and the findings have the potential to show the impact of lockdown on implementation and coverage. However, in the first year of the programme, implementation only started in September 2019 and some of the layered services were not yet available and therefore the first year also does not reflect the true potential of the intervention.

Another major limitation to this study was data capturing. Due to challenges with biometric verification on the "My Hope" system, many SRs had to capture data on paper and manually enter the data into the system, leaving significant room for human error, misplaced hard copies and a large backlog of data. Information about layered services was only available for AGYW referred for biomedical services such as HIV testing, ART and PrEP due to issues with the service plan indicators and even then, the information was limited. One challenge highlighted by PRs is that the "My Hope" system automatically checks all referral options for beneficiaries and thus fieldworkers must uncheck referral options to accurately report referrals, leading to overestimates of referral indicators. Successful referrals tend to be underestimated as SRs can only mark referrals as successful after receiving a stamped document from AGYW who attended the service. The record review reflects a process of data collection that may be prone to social desirability reporting bias from participants, especially during lockdown, and this bias was likely to have been in the

direction of underreporting for sensitive issues such as sexual behavior and violence. These challenges made it very difficult to evaluate the theory of change through coverage cascades in the record review and thus Objective 2 could not be appropriately addressed in this report.

The strengths of the record review are that it provides useful insights on coverage of the programme with core services as well as the age, gender, occupation, school status and sexual behaviours of the beneficiaries reached. While we can infer information from the sample of AGYW who participated in the AGYW survey and qualitative interviews, the record review provides information on all beneficiaries of the programme and is not subject to selection bias.

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Appendix

Appendices are available from authors upon request.