

Monitoring HIV Prevention, Care, and Treatment Indicators in Malawi's One Community Program

Malawi has a generalized HIV epidemic with a prevalence of 10.6 percent among those aged 15 to 64 years.¹ In the southern region of Malawi, HIV prevalence rates are higher than in other regions, ranging from 15 to 18 percent by district.¹

According to the most recent Malawi Population-Based HIV Impact Assessment (MPHIA), Malawi falls short of the first 90 of the UNAIDS 90-90-90 targets but has surpassed the second and third: 77 percent of people living with HIV (PLHIV) ages 15 to 64 years know their status; of those, 91 percent are on antiretroviral treatment (ART); and of those on ART, 91 percent are virally suppressed.¹

USAID/Malawi is supporting the five-year One Community (One-C) program (2015–2020), implemented by the Johns Hopkins University Center for Communications Program (JHU-CCP), with Plan International and Project HOPE. One-C, being implemented in eight districts in the southern region of Malawi, is a community-based program that seeks to increase utilization of HIV prevention, care, and treatment services among high-risk populations, improve linkages to services at the community level, and encourage the adoption of HIV risk reduction behaviors.²

The purpose of this Project SOAR activity—conducted by the Population Council in collaboration with the University of Malawi College of Medicine—is to monitor key HIV prevention, care, and treatment outcomes among populations who are targeted by the One-C program, including:

- Orphans and other vulnerable children (OVC) (0 to 17 years of age) and their caregivers (18 and older)
- Out-of-school adolescent girls and young women (AGYW) (15 to 24 years of age)

KEY FINDINGS

- Positive changes over one year were observed from monitoring key HIV indicators in districts implementing the One Community program in Southern Malawi including:
 - Increases in HIV testing among all groups, except for OVC.
 - Increases in viral load testing among OVC caregivers.
 - Decreases in children too sick to participate in daily activities.
 - Increases in children regularly attending school.
 - Increases in AGYW not supporting inequitable norms around women's and men's roles.
- Areas that require further attention include:
 - Caregivers' knowledge of HIV status of children in their care
 - Sexual risk behaviors among AGYW.
 - Inequitable gender norms around violence in the home among female OVC caregivers.
 - Children's progress in school during the last year.
 - Caregivers' perceptions that disciplining children through physical punishment is acceptable.



The One-C Intervention

One-C leverages trained community resource persons to conduct comprehensive home-based case management and implements social and behavior change activities to increase the use of HIV prevention, testing, care and support services, and encourage positive behaviors that reduce the impact of HIV on communities. Depending on the needs identified, priority groups are provided services directly or escorted, and passive referrals are provided. Components of the One-C intervention include the following:^{2,4}

- Targeted community HIV testing services at hot spots and through mobile and client-initiated approaches.
- Referrals to start ART and linkages to support groups for adherence support for those who test positive.
- Regular household visits to PLHIV and delivery of services including condom education and distribution; support for disclosure; screening and referral for tuberculosis (TB), sexually transmitted infections (STIs), major depression, and malnutrition; education to reduce stigma and discrimination; assessment of adherence to treatment and clinic appointments; and adherence counseling.
- Economic strengthening activities (e.g., village saving and loan groups) for vulnerable households, including OVC and their caregivers.
- Prevention services including referrals for voluntary medical male circumcision (VMMC).
- Community fairs that aim to generate demand for existing HIV and AIDS services including condoms, HIV testing and treatment, and VMMC.
- Community action sessions that engage members of the local community in activities to demonstrate their commitment to preventing gender-based violence (GBV) and other harmful gender norms and practices.
- Individual and small group sessions for priority groups to discuss issues that affect their lives in order to adopt positive health behaviors that will reduce their risk to HIV.
- Go! Girls Clubs for out-of-school AGYW to build social assets. Clubs focus on HIV prevention, care and treatment, STIs, GBV, positive gender roles, positive parenting and caregiver skills, financial literacy, norms change, and economic strengthening.
- Promotion of HIV testing among OVC, risk reduction counseling for older HIV-positive OVC, and symptomatic screening for TB, STIs, and major depression.

- Other vulnerable populations (OVP) ages 18 and older, including fishermen, estate workers, and market vendors

This brief highlights key quantitative findings from the monitoring activity. For qualitative findings that contextualize the extent to which One-C is improving the well-being and decreasing the risk of HIV acquisition among the three priority populations, see the results brief entitled, “Participant Experiences from One Community Program in Malawi.”^{a,3}

^a<http://www.projsoar.org/resources/malawi-onec-qual-resbrief/>

METHODS

Two rounds of cross-sectional surveys were conducted one year apart in five of the eight districts of Southern Malawi (Blantyre, Chikwawa, Mangochi, Mulanje, and Phalombe) where One-C was being implemented.^b Round one of data collection occurred in December 2016 to January 2017 and round two of data collection occurred in August to September 2018.

^bThe study was originally planned as a randomized evaluation to evaluate the impact of One-C. For more details regarding the original study design, see http://www.projsoar.org/wp-content/uploads/2017/12/Malawi_OneC_Brief.pdf.

Study sites were randomly selected from a list of health facility catchment areas based on where program implementation and the evaluation were planned within the five districts. A two-staged sampling procedure was used in which survey enumeration areas were selected proportional to size, within sites, and households randomly selected. The sampling frames for each population (OVC caregivers, out-of-school AGYW, OVP) were generated via a household screening exercise.

Primary outcome indicators by domain and study population are listed in Table 1.

Table 1 Primary outcome indicators by domain and study population

Outcome domain	Indicator	Study population [‡]
Well-being	% of school-aged children regularly attending school [†]	OVC
	% of caregivers who agree that harsh physical punishment is an appropriate means of discipline or control in the home [†]	OVC
Accessing HIV services	% of HIV-negative participants who have obtained the results of an HIV test within the previous six months	OVC caregiver, AGYW, OVP
Sexual risk behaviors	% of participants reporting using a condom at last sex	OVC caregiver, AGYW, OVP
	% of participants reporting sexual behavior with 2 or more partners in the previous 30 days	OVC caregiver, AGYW, OVP
Gender norms	% of participants who hold positive norms regarding gender-based violence	OVC, AGYW, OVP
	% of participants who hold equitable norms regarding the roles of women and men	OVC, AGYW, OVP

[‡]Outcomes of OVC are reported by the caregiver only.

[†]Denotes a PEPFAR Monitoring, Evaluation, and Reporting (MER) essential indicator.

WHO WERE THE STUDY PARTICIPANTS?

	Round One (R1) Sample	Round Two (R2) Sample
OVC caregivers	n=818 (110 men, 708 women)	n=819 (82 men, 737 women)
AGYW	n=759	n=766
OVP	n=881 (391 men, 490 women)	n=815 (391 men, 424 women)

RESULTS

Distal and proximal components of the 90-90-90 targets

While not directly measured as part of the 90-90-90 targets, key distal and proximal components to monitor, evaluate, and address in HIV programming are gender norms and sexual behaviors, respectively.

Distal: gender norms

We investigated trends in gender attitudes at round two compared to round one by measuring agreement with statements supporting violence and traditional gender roles from the Gender Equitable Men (GEM) scale.⁵ Gender inequitable attitudes as measured by the GEM scale have been shown to be associated with HIV related outcomes, including decreased odds of current ART use, reported STI symptoms, lack of contraceptive use, and physical and sexual violence against a partner.^{6,7}

Two sub-scales of the GEM scale were used, and internal consistency reliability was assessed: roles of women and men (5 questions; Ordinal theta: 0.85)

and gender-based violence (3 questions; Ordinal theta: 0.54). Responses for the “roles of women and men” sub-scale were categorized as low, medium, or high equity. An example of one of the five statements from the “roles of women and men” subscale is: “A woman’s role is taking care of her home and family.” Due to low reliability of the GBV sub-scale, we report frequencies of one of the key statements from the sub-scale: “A woman should tolerate violence to keep her family together.”

Looking at the roles of women and men, there was only a positive change among AGYW from round one to round two—a smaller percentage expressed support for inequitable gender roles (Table 2).

With regards to attitudes toward GBV, the following percentages of each sample “agreed” or “partially agreed” with the statement: “A woman should tolerate violence to keep her family together” (Table 3). Support for this statement increased among all three samples across rounds except for among male OVPs, with statistically significant differences among female OVC caregivers and AGYW.

Table 2 Support for inequitable gender roles of women and men (GEM sub-scale) among OVC caregivers, AGYW, and OVP

	OVC caregivers		AGYW		OVP	
	R1 (n=817)	R2 (n=818)	R1 (n=758)	R2 (n=766)	R1 (n=880)	R2 (n=815)
Low equity (roles of women and men)	51%***	61%	56%***	48%	46%*	49%

*p<0.05, **p<0.01, ***p<0.001; differences between R1 and R2.

Table 3 Acceptance of GBV among OVC caregivers, AGYW, and OVP

	OVC caregivers				AGYW		OVP			
	Male		Female		R1 (n=758)	R2 (n=766)	Male		Female	
	R1 (n=110)	R2 (n=82)	R1 (n=707)	R2 (n=737)			R1 (n=391)	R2 (n=391)	R1 (n=490)	R2 (n=424)
	11%	16%	18%**	24%	14%***	24%	15%	13%	19%	23%

*p<0.05, **p<0.01, ***p<0.001; differences between R1 and R2.

Proximal: sexual behaviors

We asked about condom use at last sex in the past 6 months for each sample. The prevalence ranged from 19 to 29 percent, with no statistically significant differences between rounds one and two among the three samples (Table 4).

A higher percentage of male OVC caregivers (57 vs. 46 percent) and male OVPs (57 vs. 54 percent) reported being circumcised at round two compared to round one, although the differences were not statistically significant. The larger differences in circumcision prevalence for OVC caregivers may be due to sampling variation given the smaller numbers in this group. Average age of circumcision across both groups and rounds was 13. Approximately four out of five men were circumcised by traditional practitioners, family, or friends, rather than health workers, with no significant difference between rounds.

Consistent with previous surveys in Malawi and other settings, men were significantly more likely to report having sex with two or more partners in the previous 30 days. Marginal differences were observed

between male OVC caregivers and OVP; reporting was consistently low across all female samples (Table 5).

AGYW

Male partners of AGYW

AGYW were 21 years of age on average in both rounds, and they reported their main male partners to be 25 years of age on average. Less than 2 percent of AGYW in both rounds reported having a second partner with whom they currently have an ongoing relationship.

Transactional sex

Approximately one of every three AGYW engaged in transactional sex in the last six months (R1: 34 percent; R2: 29 percent). Transactional sex was defined as receiving money, accommodation, medicine, food, or support for children, debts, or school fees from a main or second sexual partner, with confirmation they would not continue the relationship without the partner's support.

Table 4 Condom use at last sex in the past 6 months among OVC caregivers, AGYW, and OVP

OVC caregivers		AGYW		OVP	
R1 (n=527)	R2 (n=538)	R1 (n=540)	R2 (n=599)	R1 (n=720)	R2 (n=676)
29%	24%	23%	21%	19%	19%

Note: no statically significant differences were observed between R1 and R2 within groups.

Table 5 Sex with 2 or more partners in the previous 30 days among OVC caregivers, AGYW, and OVP

OVC caregivers				AGYW		OVP			
Male		Female		R1 (n=757)	R2 (n=766)	Male		Female	
R1 (n=106)	R2 (n=82)	R1 (n=706)	R2 (n=737)			R1 (n=384)	R2 (n=389)	R1 (n=486)	R2 (n=424)
6%*	15%	<1%	<1%	<1%	<1%	11%	13%	<1%	<1%

*p<0.05, difference between R1 and R2; differences across males and females were statistically significant at p-values < 0.001.

Testing—the first 90 of 90-90-90

Across rounds, a significantly higher percentage of HIV-negative participants from each of the three groups had received the results of an HIV test within the previous six months (Table 6). A higher percentage of OVC caregivers knew the HIV status of the child in their care in round two (51 percent; n=819) than round one (45 percent; n=818), although this difference was not significant.

Treatment—the second 90 of 90-90-90

Consistent with the results of recent MPHIA estimates, among OVC caregivers (R1: n=307; R2: n=328), AGYW (R1: n=10; R2: n=18), and OVP (R1: n=83; R2: n=97) who self-reported as living with HIV, more than 90 percent were currently on ART at both rounds one and two.

Viral suppression—the third 90 of 90-90-90

Although we did not conduct viral load (VL) testing, service utilization in relation to viral suppression can be observed through the indicator “receiving a test for VL in the last six months.” The World Health Organization recommends that VL testing be conducted at 6 and 12 months after ART initiation and every 12 months after, but Malawi’s 2016 Guidelines for Clinical Management of HIV recommends VL testing at 6 months and 24 months after ART initiation, and every 24 months thereafter.^{9,10} Among OVC caregivers and OVPs, there was a higher percentage of PLHIV who reported having a VL test in the last six months at round two, although only the difference among OVC caregivers

was statistically significant (Table 7). The increase in VL testing at round two aligns with national efforts to scale up VL testing after Malawi’s 2016 HIV guidelines recommended VL testing as part of routine care.⁹ Yet still approximately 40 percent have not been tested for VL in the past 6-month period at round two. This may be reflective of the timing of study participants’ VL tests, as they may not have had a VL measurement scheduled over the past 6-month period, as well as ongoing VL scale-up efforts still in progress at round two. Note that AGYW are intentionally not included here due to small sample sizes.

Table 7 VL test in last 6 months among OVC caregivers and OVP

OVC caregivers		OVP	
R1 (n=307)	R2 (n=328)	R1 (n=83)	R2 (n=97)
50%**	62%	52%	58%

**p<0.01; difference between R1 and R2.

Table 6 Received result of an HIV test within the previous 6 months among OVC caregivers, AGYW, and OVP

OVC caregivers		AGYW		OVP	
R1 (n=511)	R2 (n=490)	R1 (n=748)	R2 (n=748)	R1 (n=797)	R2 (n=717)
46%**	56%	58%***	70%	49%**	58%

*p<0.05, **p<0.01, ***p<0.001; differences between R1 and R2.

Vulnerable children

In Malawi, 1.4 million children are affected by HIV/AIDS, and of those, 770,000 (13 percent) have been orphaned due to AIDS-related deaths.¹⁰ Many children in Malawi live in households that are vulnerable due to economic or food insecurity, or having a chronically ill adult in the household. PEPFAR Malawi provides direct services to OVC and their households to address contributing factors to vulnerability. Therefore, PEPFAR MER OVC indicators were collected as a component of this activity.¹¹ From round one to two, there was:

- A statistically significantly lower percentage of children who have been too sick to participate in daily activities in the last 2 weeks (47 to 36 percent, $p < 0.001$)
- A statistically significantly higher percentage of households who were able to access money to pay for unexpected household expenses (41 to 47 percent, $p < 0.01$).
- A higher percentage of children who regularly attended school (46 to 49 percent); not statistically significant.
- Virtually no change in the percentage of children under 5 who were undernourished (2 to 4 percent).
- A statistically significantly lower percentage of children who have a birth certificate (25 to 19 percent, $p < 0.01$).
- A statistically significantly lower percentage of children who progressed in school during the last year (60 to 40 percent, $p < 0.001$).
- A statistically significantly lower percentage of children <5 years of age who recently engaged in stimulating activities with any household member over 15 years of age (92 to 86 percent, $p < 0.05$).
- A statistically significantly higher percentage of caregivers who agree that harsh physical punishment is an appropriate means of discipline or control in the home or school (11 to 19 percent, $p < 0.001$).

SUMMARY

Changes in key HIV indicators from round one to round two suggest positive trends as well as areas that could benefit from further attention and monitoring.

- There were significant increases in HIV testing among all groups except for OVC, and VL testing among OVC caregivers.
- No major changes were observed in the sexual risk behaviors of AGYW, including condom use and transactional sex. Endorsement of inequitable gender roles of women and men decreased over time among AGYW.
- Positive changes were seen regarding the health and schooling of vulnerable children, such as fewer children too sick to participate in daily activities and more children regularly attending school.
- However, there were also some indicators among this group that changed in the opposite direction than desired: fewer children progressed in school during the last year and more caregivers agreed that disciplining children through physical punishment was acceptable.

Some of these changes may have been impacted by One-C activities. For example, home-based case management by community resource persons may have contributed to increases in HIV testing. Caregiver parenting education may have contributed to some of the positive changes seen among vulnerable children. Critical dialogue on harmful gender norms for out-of-school AGYW may have contributed to the reduction in support for less equitable norms. However, attributing changes to intervention exposure is not possible with assessments of trend data alone.

NEXT STEPS

A third round of data collection to monitor key HIV indicators is taking place in 2019.

Results will be used to inform the Malawian support strategies for vulnerable children and adults, improve PEPFAR Malawi programming, and inform the national Malawian and global PEPFAR policy agendas for HIV prevention, care, and support.

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