PILOT REPORT

Almasi

Increasing Access to HIV Services Among Young Men who Have Sex with Men in Kenya.

y·labs

Contents

Abbreviations

ART: Antiretroviral therapy

CBO: Community based organization

HCD: Human centered desig

HIV: Human Immunodeficiency Virus

HIVST Kit: HIV self testing kit

Hoymas: Health Options for Young Men on HIV/AIDS

HTS: HIV testing services

IQR: Interquartile range

IVR: Interactive voice response

LGBTQ: Lesbian, Gay, Bisexual, Transgender and Queer or Questioning

Maaygo: Men Against AIDS Youth Group

MSM: Men who have sex with men

NASCOP: National AIDS and STI Control Programme

OTS: On-the-spot testing

PC: Peer coordinator

PE: Peer educator

PrEP: Pre-exposure prophylaxis

SMS: Short message service

STI: Sexually transmitted infection

YLabs: Youth Development Labs

YMSM: Young men who have sex with men

Executive Summary

The criminalization and stigmatization of same-sex sexual activity contribute to social, community, and healthcare-related barriers that prevent young men who have sex with men (YMSM) from accessing high-quality HIV prevention and treatment services.

Youth Development Labs (YLabs) trained two community-based organizations in Kenya—Men Against AIDS Youth Group (Maaygo) in Kisumu, and Health Options for Young Men on HIV/AIDS (Hoymas) in Nairobi—in human-centered design to develop an HIV self-testing campaign and service delivery model. HIV self-testing kits (HIVST kits) have emerged as a promising tool to increase access to testing and support for clients to have greater agency and privacy over their testing experience. However, challenges have persisted in generating demand for HIVST kits, ensuring reporting of self-test results, and linking clients who test positive to follow-up care.

Human-centered design was employed to co-design, iterate on, and refine ideas for the intervention in partnership with YMSM in Kenya, for whom accessing confidential HIV testing and support services is a persistent challenge. During the research and design phases, the team discovered that fear of testing positive and lack of accessibility to stigma-free providers were two of the main barriers to HIV testing. In response, Maaygo and Hoymas implemented an outreach and testing intervention that consisted of the following:

1. *A digital and physical ad campaign with YMSM-focused messaging to address common fears about HIV testing*
2. *A subscription to an automated SMS messaging platform to connect YMSM to peer educators who deliver HIVST kits and incentives to convenient pick-up points*
3. *Streamlined, confidential access to sensitized clinicians to encourage reporting of HIVST results and facilitate linkage to follow-up care*

During the three-month pilot, digital ads for the Almasi program were viewed over 800,000 times across various social media platforms. A total of 1,754 YMSM subscribed to the campaign messaging platform, of whom 1,070 completed the SMS messaging dialogue. Peer educators responded to 980 requests for an HIVST kit, and 973 kits were ultimately delivered. Nearly all YMSM who received a test kit (961) reported back their results, 27 of which were positive for HIV. Ultimately, 24 YMSM received confirmatory testing and started on antiretroviral therapy (ART). These 24 clients represent 86% of the 28 total new enrollments on ART across both organizations from June-October 2021.

973 HIVST kits were delivered to YMSM. Nearly all YMSM who received a test kit (961) reported back their results.

Furthermore, 88% of YMSM who received testing services were new clients to either organization, and 73% had never tested for HIV or last tested over 12 months ago. Comparison to Maaygo and Hoymas' pre-COVID pandemic 2019 outreach data shows that the Almasi program brought in 265% more new clients, 834% more never testers, and 123% more infrequent testers than their conventional programming.

73% of testers had never tested for HIV or last tested over 12 months ago.

Preferred awareness channels and testing incentives differed between YMSM in Kisumu and Nairobi, emphasizing the need to tailor future programs to contextual nuances in order to maximize reach. The human-centered design methodology allowed Maaygo and Hoymas to design customized engagement strategies in partnership with YMSM in their peer networks, and reach YMSM across a mix of digital and non-digital channels. The Almasi pilot results indicate the value of meaningfully engaging YMSM in the design of outreach programs intended to reach them.

EXAMPLE OF AD CAMPAIGN

Background

The Need for MSM-Focused Investment in HIV Programming

Key populations, such as men who have sex with men (MSM), continue to bear the brunt of the HIV/AIDS epidemic and are recognized as being central to achieving UNAID's Fast-Track strategy to end AIDS by 2030. However, less than 1% of the global funds directed towards HIV response in low- and middle-income countries were used for MSM- focused programming between 2016-2018.[1] There is a pressing need for increased investment in innovative approaches to improve HIV prevention and care among key populations, particularly young MSM (YMSM).

In Kenya, 29% of all new HIV infections are among youth, and the HIV prevalence among MSM is six times that of the general adult population.[2,3] The criminalization and persistent stigmatization towards MSM in Kenya is a key contributor to this health disparity. The World Health Organization has advised that key populations, such as MSM, should either lead or be meaningfully engaged in programs targeting their communities.

Barriers to HIV Testing and Treatment Among Young MSM

YMSM, defined here between the ages of 15 and 24, are often hesitant to get tested for HIV and/or to link to HIV care, and also face various structural barriers in accessing quality care. Some of these barriers identified in the literature and through primary research conducted with YMSM in Kenya during the Almasi Challenge are:

- Fear of testing positive and being stigmatized by family and friends
- Mistrust of healthcare providers due to experiences of being stigmatized or the anticipation of stigmatization
- Low utilization of healthcare services in general for fear of sexual orientation being revealed and subsequent rejection from family and employers[4]
- Lack of psycho-social support for testing, follow-up, and medication adherence[5]
- Limited income and earning power to pay for healthcare services or transportation to facilities
- Conflicting information about HIV risk
- Having few or no sources of medically accurate information on HIV and sexually transmitted infections (STIs) that is accessible (e.g., free of medical jargon) and tailored to the unique needs and situations of MSM

1. Scamell, D. Fast-Track or Off Track? How insufficient funding for key populations jeopardises ending AIDS by 2030. Partnership to Inspire, Transform and Connect the HIV Response; Aidsfonds. 2020.

2. Shah P, Kibel M, Ayuku D, et al. A Pilot Study of "Peer Navigators" to Promote Uptake of HIV Testing, Care and Treatment Among Street-Connected Children and Youth in Eldoret, Kenya. AIDS Behav. 2019;23(4):908-919.

3. Bhattacharjee P et al.. HIV prevalence, testing and treatment among men who have sex with men through engagement in virtual sexual networks in Kenya: a cross-sectional bio-behavioural study. J. Int. AIDS Soc. 2020;23(S2):e25516.

4. Sharma et al. Sexual identity and risk of HIV/STI among men who have sex with men in Nairobi. Sexually Transmitted Diseases. 2008;35(4):352-354.

5. Micheni et al. Health provider views on improving antiretroviral therapy adherence among men who have sex with men in coastal Kenya. AIDS Patient Care and STDs. 2017:31(3): 113-121.

Organizations

Maaygo

Men Against AIDS Youth Group (Maaygo) is a community-based organization (CBO) working in Kisumu County. Maaygo works to increase access to holistic health and rights-based services for the well-being of gay men, bisexual men, MSM, and male sex workers. Maaygo provides quality HIV prevention and treatment, sexual and reproductive health services, mental health services, human rights education, policy advocacy, and economic empowerment.

Hoymas

Health Options for Young Men on HIV/AIDS (Hoymas) is a CBO formed by male sex workers and people living with HIV and AIDS. Hoymas serves male sex workers and YMSM with practical knowledge on safe sex, preventative materials distribution, comprehensive sexual and reproductive health service delivery, and economic empowerment. Other work done by Hoymas includes promotion and protection of human rights, including police sensitization, paralegal training, community training on human rights, and advocacy for sex workers and the LGBTQ community.

YLabs

Youth Development Labs (YLabs) is a global design and research organization working to improve health and economic opportunity for young people between the ages of 10–24 years. Founded in 2016 at the Harvard Innovation Lab, YLabs currently works with international and community-based partners in over 15 countries in sub-Saharan Africa, South Asia, and Central America to design and evaluate youth-driven programming focused on sexual and reproductive health, HIV/AIDS, mental health, and financial inclusion.

Project Overview

The Almasi Challenge, facilitated by YLabs and funded by Viiv Positive Action, was an innovation challenge from 2020-2021 that sought to improve HIV testing and care for YMSM by 1) channeling funding and innovation skills to YMSM-focused CBOs in Kenya, and 2) developing, testing, and evaluating YMSM-driven interventions to improve HIV outcomes.

From 30 original applicants to the Challenge, five organizations were selected to receive four months of intensive capacity-building from YLabs on how to use human-centered design (HCD) to improve their YMSM-focused HIV programming. The organizations explored and tested various ideas with YMSM, using HCD process and participatory co-design sessions with YMSM in their communities. The ideas ranged from fitness apps to barbershops with HIV testing services.

At the end of the Innovation Challenge, two organizations—Maaygo and Hoymas—were selected by a panel of judges at the Almasi Innovation Lab to receive funding as a joint partnership to develop, test, and pilot a social behavior change (SBC) campaign approach to increase HIV testing rates among YMSM in Nairobi and Kisumu counties using short message service (SMS), interactive voice response (IVR), and streamlined testing services. Maaygo and Hoymas both have large peer cohorts and existing outreach programs to MSM that are well-established and well-recognized in Kisumu and Nairobi, respectively, but were plateauing in engagement of new YMSM who had never tested or infrequently tested (defined as last tested over 12 months ago).

KASH
Kisumu, Kenya
Idea: Fitness app that links YMSM to HIV testing and treatment on-site or through delivery.

MAAYGO & HOYMAS
Kisumu & Nairobi, Kenya
Idea: SMS health message campaign that links YMSM to HIV testing.

WACHA
Mombasa, Kenya
Idea: MSM barbershop that offers HIV testing on-site and linkage to care.

AMKENI
Malindi, Kenya
Idea: An antiretroviral (ART) site that is a one-stop shop for YMSM and also serves as an economic empowerment center.

Developing YMSM-Focused Behavior Change Messaging

SBC messaging was a core aspect of Maaygo and Hoymas' proposed intervention. YLabs worked closely with both organizations to develop and test messages that would be tailored to the specific needs of the YMSM population. The design of messages consisted of three main steps that led to the final campaign: 1) conducting an audience analysis; 2) drafting key messages in collaboration with YMSM; and 3) testing and finalizing the messages.

The goal of the audience analysis was to identify various characteristics (e.g., sociodemographic, geographic), beliefs, attitudes, barriers, and facilitators that impact HIV testing among YMSM in Nairobi and Kisumu. The analysis also explored this population's preferred communication channels and identified people who have an influence on YMSM (e.g., social media personalities).

Across Nairobi and Kisumu, seven common attitudes and beliefs were identified. YMSM:

1. Fear testing positive for HIV
2. Fear the pain from needles
3. Feel uncomfortable with the screening process and being asked personal questions
4. Fear judgment from service providers
5. Feel uninformed about diagnosis and management
6. Believe testing is not necessary if they feel healthy and do not have symptoms
7. Fear being stigmatized and associated with HIV, especially if they get tested at an HIV organization or drop-in center

Next, YLabs guided Maaygo and Hoymas to draft key campaign messages that directly focused on the seven attitudes/beliefs identified. Every message had to be clear and factually accurate, command attention, create trust, and include a call to action. Maaygo and Hoymas used co-design workshops to collaboratively create messages with peer educators within the YMSM community to respond to each attitude/belief. After drafting the messages, Maaygo and Hoymas also worked with YMSM peer educators to identify who would deliver the messages (e.g., peer educators, health providers, social media influencers) and what type of incentive to include within the message (i.e., free condoms, flavored lubricant, airtime).

Finally, Maaygo and Hoymas conducted qualitative feedback sessions with YMSM to identify which messages and messengers motivated YMSM to get tested. YLabs also facilitated A/B message testing on Facebook to analyze which messages received the most engagement (i.e. likes, shares, and comments) from young men in Kenya (n=4,068). Feedback during this rapid testing indicated that YMSM desired fun, colloquial messages that included YMSM-specific slang. They preferred messages that were empowering, reassuring, and not solely informational. Furthermore, they preferred that these messages come from their peers and queer social influencers. The top messages were then tested through a three-week pre-pilot period in March 2021 with 427 YMSM in order to gather quantitative and qualitative feedback on campaign engagement and further refine the messaging. The final set of messages used during implementation can be found in Appendix A.

Improving the HIV Testing Experience

In addition to developing SBC messaging as a demand generation strategy, YLabs also supported Maaygo and Hoymas to explore improvements in the testing and linkage to care experience for YMSM. The project teams gathered feedback from YMSM on how they would prefer to link to testing services once they were motivated to do so. Key barriers included fear of being seen at a clinic facility, structural barriers to accessing clinics such as transportation cost and distance, and fear of being judged by a provider.

To respond to these barriers, Maaygo and Hoymas explored how to expand access to HIV self-testing kits (HIVST kits) through more convenient touchpoints that are frequented by YMSM. Through multiple rounds of testing and feedback from YMSM, they created an HIVST delivery system using their network of peer educators. YMSM could request an HIVST kit and have it delivered to a location near them within 48 hours by a trained peer educator who would also offer instructions and follwow-up support.

Refining the Intervention Before Piloting

Maaygo and Hoymas tested out the ad campaign and HIVST kit delivery system through a three-week pre-pilot refinement period called live prototyping. Live prototyping is a technique in the HCD process to rapidly gather quantitative and qualitative feedback from users about a new intervention and make final changes before implementation. During these three weeks, 116 YMSM were tested and nearly all (92%) opted to test via HIVST kit delivery rather than clinic-based testing. Live prototyping revealed several key feasibility and engagement challenges that Maaygo and Hoymas were able to adjust before moving into the pilot. These adjustments included:

- Grouping HIVST kit deliveries based on location of the recipients and having “pick up points”, rather than house-by-house delivery, in order to increase efficiency and cost-savings
- Encouraging YMSM to report back their test results by offering airtime incentives (Ksh 100-250)

During the three-week live prototyping period, 116 YMSM were tested and nearly all (92%) opted to test via HIVST kit delivery rather than clinic-based testing.

- Offering on-the-spot (OTS) HIV testing via a mobile testing van, as an alternative to HIVST kits, in case kits were unavailable due to supply chain challenges in Kenya
- Simplifying to use only SMS, rather than using both IVR and SMS (engagement across SMS, IVR, and WhatsApp were approximately equivalent during live prototyping, indicating that the inclusion of an IVR option was not essential; therefore, we simplified the pilot approach to only use SMS to reduce cost and complexity)
- Reducing the number of introductory, rapport-building SMS messages before HIV testing content in order to decrease drop-off rates
- Choosing clinicians to follow up with YMSM after the kit delivery rather than peer counselors, after observing that some YMSM were uncomfortable sharing their test results with a peer counselor who was part of their social community
- Partnering with younger online influencers who have followers in the younger age range (15-19) and using targeted peer-to-peer physical flyer distribution, after observing that most of the YMSM who requested HIVST kits were above 20 years of age
- Increasing the speed and efficiency of connecting motivated YMSM to a peer counselor for HIVST delivery, after observing that 58% of YMSM said that they were "ready to test" but only 25% actually received a test

After multiple rounds of testing, co-design, and refinement with YMSM and other key stakeholders (e.g., providers) in Kisumu and Nairobi over a two-month period, Maaygo and Hoymas finalized the intervention to take forward into piloting.

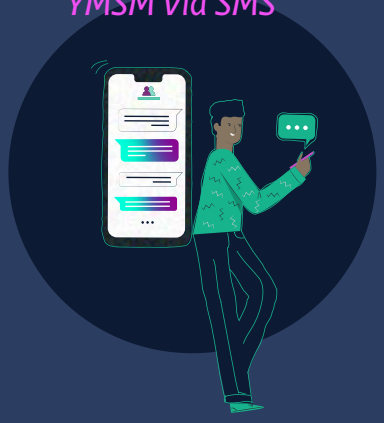
Intervention Design

The pilot program was implemented by Maaygo and Hoymas in Kisumu and Nairobi from June-October 2021. The piloted intervention centered around the following ideas:

1. *YMSM-Focused Ad Campaign*

Using motivational marketing materials and SBC messages co-designed with YMSM, Maaygo and Hoymas utilized paid Facebook ads, digital flyers on relevant WhatsApp and Telegram groups, peer-to-peer physical flyer outreach, and partnerships with queer social media influencers on Facebook and TikTok to generate demand for HIVST kits. The ad campaign included offers of free condoms and scented lubricant (often difficult to access), which were significant motivators for YMSM, especially those more hesitant or fearful to test . The call to action of the ads was to text a keyword (“Young” or “Free”, depending on their city) to a specific shortcode phone number. This subscribed the YMSM to EngageSPARK, a digital engagement platform that uses automated SMS and IVR drip campaigns.

2. *Automated Engagement With YMSM Via SMS*



After seeing the ads, YMSM who subscribed to EngageSPARK interacted with SMS messages. Those who responded “ready” to test when prompted were automatically linked to a peer educator based on their location. Those who were still unsure about testing continued to receive tailored health messages that address common fears, via an automated drip campaign on EngageSPARK. A maximum of five health messages were sent to each subscriber, after which point they would be considered inactive/non-responsive. EngageSPARK is designed for hard-to-reach sections of the population that cannot be fully served on digital platforms like websites, apps and email. With the ability to set custom messages and the durations between messages, and offer specific follow-up messaging to YMSM depending on their responses, this platform offered a chance to explore scalable automation of these time-consuming tasks while assuring confidentiality.

3. *Streamlined, convenient testing and incentives to report results*

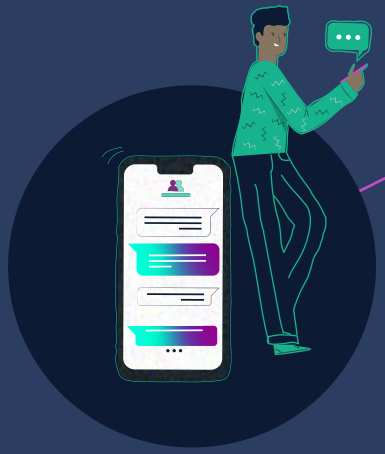
After being linked to a peer educator, YMSM were offered the option of an on-the-spot (OTS) test with a counselor or an HIVST kit delivered to them by a peer educator. Test kits were delivered within 24-48 hours in discreet packaging, along with desirable products such as condoms and lubricant. YMSM were also offered airtime (Ksh 100 ($~1.00) in Kisumu; Ksh 250 (~$2.50) in Nairobi) if they reported back their test results.

Confidential Counseling And Follow-Up Support

YMSM received pre-testing counseling by the peer educator who delivered their HIVST kit. Post-testing follow-up was conducted primarily by clinicians, who asked the YMSM for their confidential test results and offered counseling based on their status. All YMSM who tested and reported back their results were added to Maaygo and Hoymas' existing MSM peer cohorts, with regular follow-up by peer counselors to encourage future testing, preventative measures, and/or treatment.

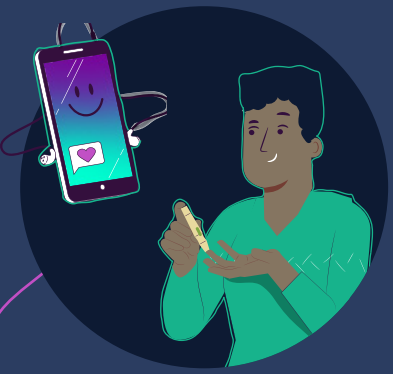
YMSM journey through the almasi intervention.

YMSM subscribes to automated messaging platform

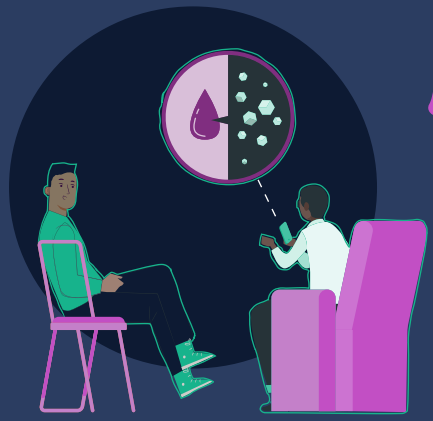


YMSM texts “ready” to get an HIVST kit delivered

HIVST (along with condoms and lube) are discreetly delivered to YMSM by a peer counselor



YMSM takes HIVST and reports back results via SMS



YMSM are linked to treatment or preventative supplies through the peer counselor

Key Outcomes

The key target outcomes of the pilot were as follows:

1. *Increase in HIV testing among YMSM (ages 15-24) who have not tested in the last 12 months in Kisumu and Nairobi counties*
2. *YMSM who test positive link to care and treatment*
3. *YMSM who test negative are willing to adopt preventative measures and commit to regular testing*

Data Collection and Analysis

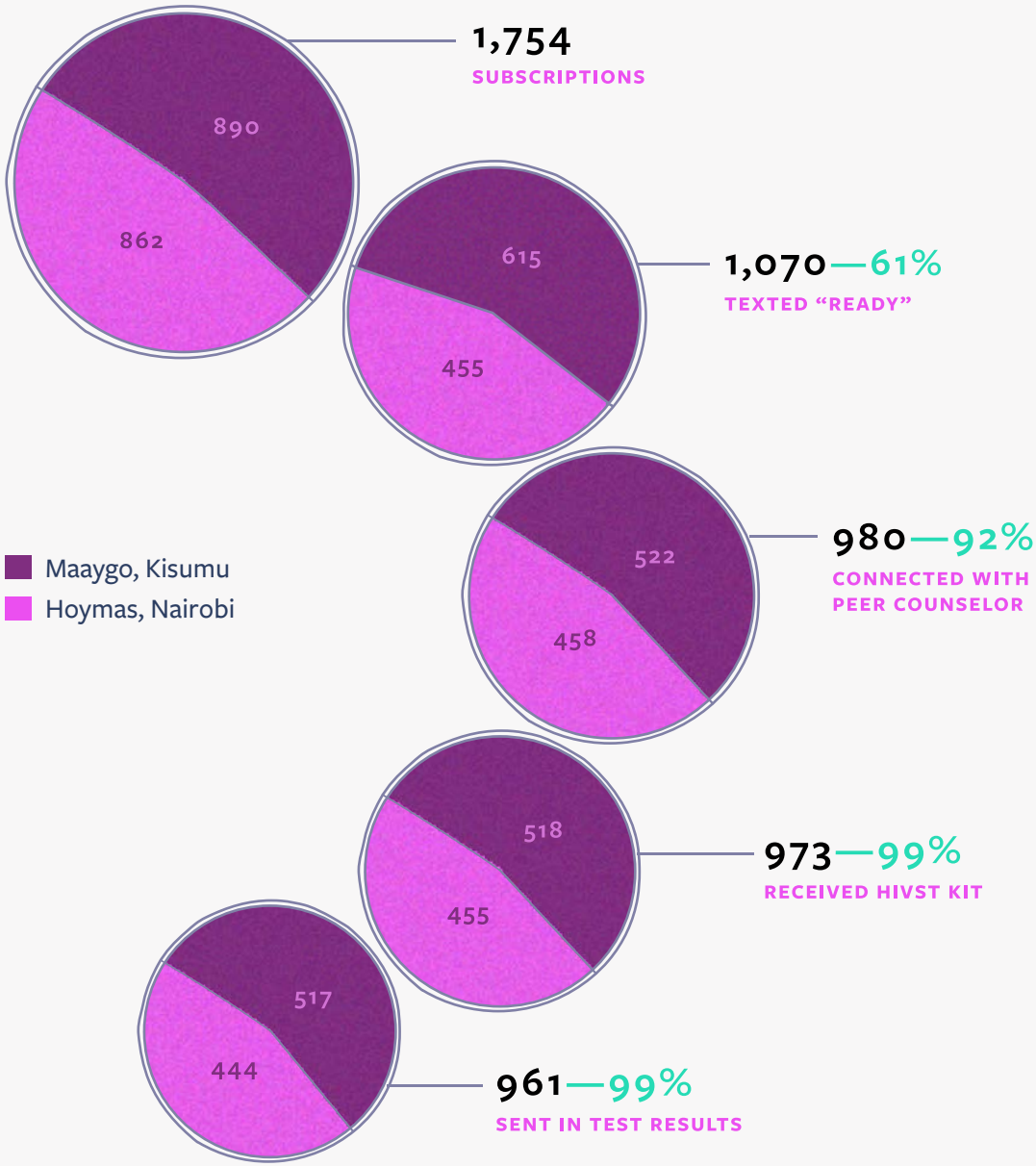
Dedicated research personnel collected quantitative data using structured reporting forms. Data were gathered through campaign analytical tools on social media platforms including the number of likes and shares of each ad post. Subscription data were captured using the EngageSPARK platform. Following subscription to the Alamsi program, data were collected on socio-demographic characteristics and HIVST kit delivery information for each participant. Qualitative interviews were also conducted among 50 YMSM who subscribed to the campaign but dropped off at different points on the testing journey. Interviews were conducted by Maaygo and Hoymas staff members.

Stata version 15.0 (Stata Corp; College Station, USA) was used for analyses. Summary statistics were calculated using frequencies and percentages for categorical variables, and continuous variables were described using median values with associated interquartile ranges (IQR). Differences between Maaygo and Hoymas' results were assessed using chi square or Fisher's exact tests for categorical variables.

Pilot Results

At the end of the three-month Almasi pilot, digital advertisements across social media platforms received 802,124 total views and were shared 1,171 times by viewers. As a result of these digital ads, as well as in-person flyer distribution and snowball recruitment, a total of 1,754 YMSM subscribed to the Alamsi campaign, of whom 892 (51%) were in Maaygo's jurisdiction in Kisumu and 862 (49%) were in Hoymas' jurisdiction in Nairobi.

Of those who subscribed to the campaign, 1,070 (61% of subscribers) texted that they were "ready" to test for HIV when prompted, of whom 615 (57%) were from Kisumu and 455 (43%) were from Nairobi. Among the 1,070 YMSM who texted "ready", 980 (92%) were connected to a peer educator. Overall, 973 YMSM (99% of those connected) received HIV testing; amongst those, 518 (53%) were from Kisumu and 455 (47%) from Nairobi. A total of 961 YMSM (99% of those who received testing) sent back their test results, of whom 27 received a positive result (2.8% of results reported) .



Campaign Views

The reach of social media platforms varied based on the organization and influencer. Specifically in Kisumu, WhatsApp and Tik Tok ads were viewed the most, whereas in Nairobi, Tik Tok and Telegram had the most significant reach. Overall, ads with the highest viewership were posted by external LGBTQ influencers on Tik Tok, accounting for nearly 93% of total views.

SOCIAL MEDIA PLATFORM	MAAYGO	HOYMAS	TOTAL VIEWS
FACEBOOK	7,675	7,826	15,501
INSTAGRAM	2,514	5,700	8,214
TIKTOK	11,342	731,300	742,642
WHATSAPP	11,935	9,226	21,161
TELEGRAM	0	14,606	14,606
TOTAL	33,466	768,658	802,124

Note: The Hoymas influencer who posted to his personal Tik Tok is a very locally famous LGBTQ advocate living with HIV who encourages YMSM to go for testing.

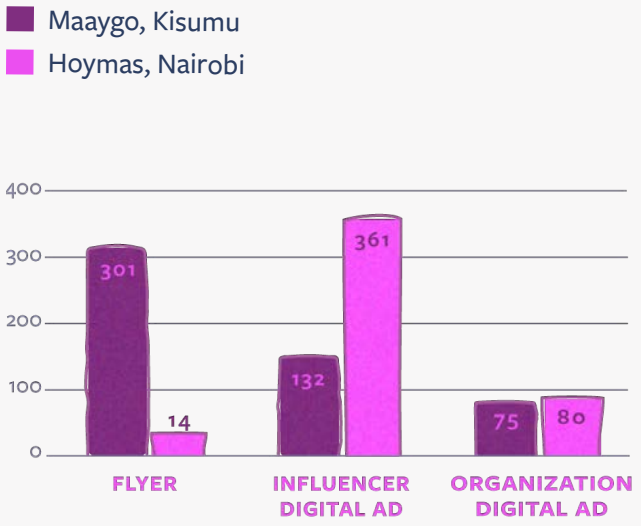
Campaign Shares

Maaygo observed the most ad shares by viewers through WhatsApp (n=420) and Facebook (n=375), while nearly all of Hoymas ads were shared through Tik Tok (n=342). This indicates the importance of including a range of social media platforms to reach a diverse set of YMSM.

SOCIAL MEDIA PLATFORM	MAAYGO	HOYMAS	TOTAL SHARES
FACEBOOK	375	0	375
INSTAGRAM	9	16	25
TIKTOK	9	342	351
WHATSAPP	420	0	420
TELEGRAM	0	0	0
TOTAL	813	358	11,171

Source of Campaign Subscription

Among YMSM who received testing, there was a significant difference in the source subscription by location ($p<0.01$). A majority of YMSM in Kisumu subscribed through flyers distributed in person by Maaygo team members (n= 301; 58% of Kisumu-based subscriptions). This contrasts sharply with Nairobi, where flyers only accounted for 3% (n=14) of Nairobi participants' subscriptions ($p<0.01$). Conversely, nearly 80% (n=361) of Nairobi participants subscribed through LGBTQ influencer digital advertising, whereas only 25% (n=132) of Kisumu participants did so ($p<0.01$). There was no significant difference in the number of subscriptions through Maaygo and Hoymas organizational digital ads (Maaygo: n = 75; 14% vs. Hoymas: n = 80; 17%) ($p=0.19$).



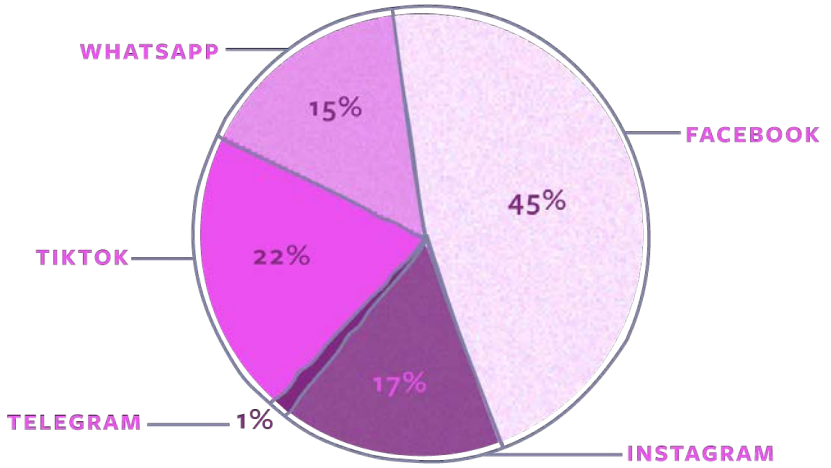
n= 967; 6 entries are missing

Social Media Source for External Influencer Ads

Among influencer digital ads, there was a significant difference between most cited social media platforms in Kisumu versus Nairobi ($p<0.01$). The majority of subscribers in Kisumu saw influencer digital ads on Facebook (45%) and Tik Tok (22%), while Nairobi participants primarily responded to Tik Tok (55%) and Instagram (29%) ads. These results indicate the need to tailor engagement strategies to reflect local preferences and customs rathe than using a one-size-fits-all approach.

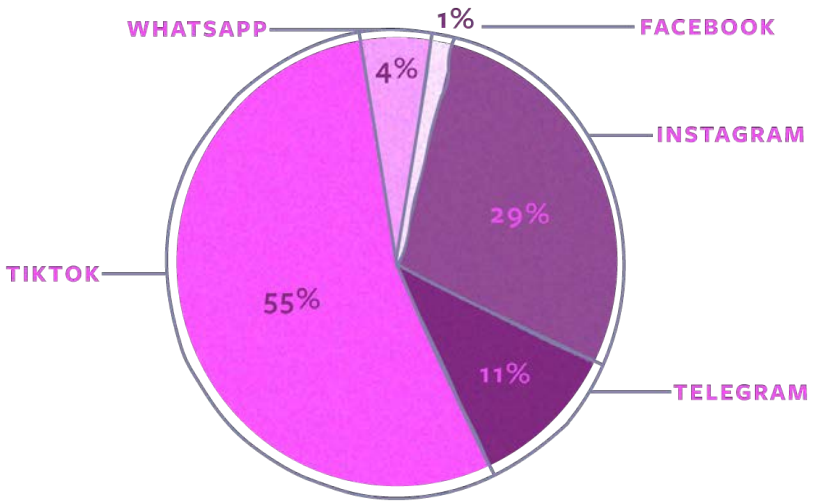
Maaygo, Kisumu

n = 131
1 entry missing



Hoymas, Nairobi

n = 351
10 entries missing



Type of Testing and Delivery

Of the YMSM who received HIV testing from either organization, 84% opted to test via an HIVST kit delivery. Historically, Maaygo and Hoymas had very little utilization of HIVST kits (in part due to frequent stockouts and/or supply chain disruptions), but these results demonstrate the strong desire from YMSM for this type of testing method due to its convenience and privacy. However, 18% of Hoymas participants opted to be tested at the clinic, and 10% of Maaygo participants were tested via OTS testing, demonstrating the need to still offer various testing options to YMSM.

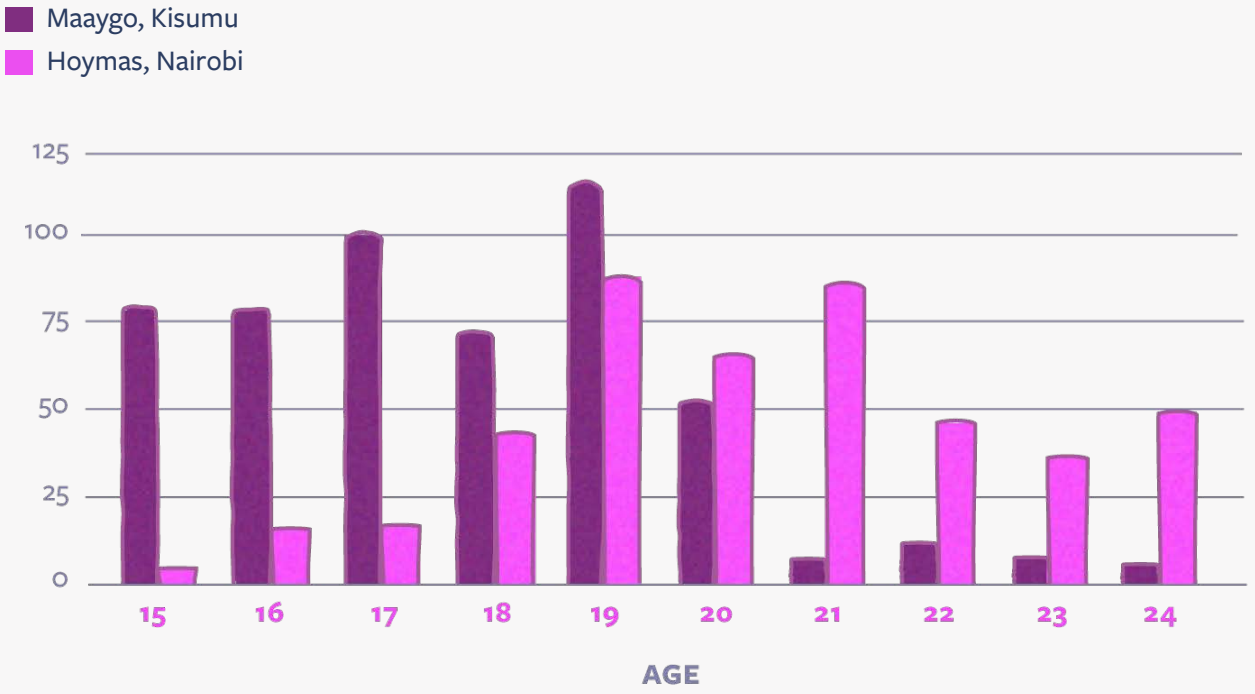
In general, peer counselors were able to quickly and efficiently coordinate delivery once YMSM texted that they were "ready" to test. Peer counselors shared participant contact information to peer educators immediately after receiving the client's information from EngageSPARK. The average number of days from when a peer educator reached out to the client to receiving a test was two days (median 1, IQR: 0-2), and clients reported back their results on average in two days (median 1, IQR: 1- 2).

TESTING TYPES AND DEIVERY	MAAYGO N=518	HOYMAS N=455	OVERALL N=973
TYPES OF TESTING			
Clinic	0 (0%)	81 (18%)	81 (8%)
On-the spot Testing	49 (10%)	28 (6%)	77 (8%)
HIVST Kit	469 (90%)	346 (76%)	815 (84%)
DISTANCE TRAVELED (KM)			
Median	5 (4-6)	14 (9.2-21)	6 (4.2-11)
Mean	5.2	15.7	9.6
Min, Max	1, 25	1, 45	1, 45

Clients

Among YMSM who received testing, the overall median age was 19 (IQR: 17-21), with 62% of participants falling between the ages of 15-19. However, the majority of YMSM in this younger age group were located in Kisumu (84%, vs. 37% in Nairobi; p<0.01).

YMSM Age Distribution



Clinic Membership and Testing History

Overall, 859 (88%) participants were new clients at either organization. Among both organizations, the majority of participants either never tested for HIV (30%) or last tested over 12 months ago (43%), demonstrating the reach of the campaign deeper into the YMSM community.

88% of participating YMSM were new clients to either organization, and 73% had either never tester or had last tested over 12 months ago.

CLIENT INFORMATION	MAAYGO N=518	HOYMAS N=455	OVERALL N=973
CLIENT HISTORY			
New Clients*	420 (81%)	432 (95%)	859 (88%)
Existing Clients	98 (19%)	15 (3%)	114 (11%)
(Missing)	0 (0%)	8 (2%)	8 (1%)
LAST TESTED FOR HIV			
Less than 3 months ago	2 (1%)	4 (1%)	6 (1%)
3-6 months ago	13 (2%)	11 (2%)	24 (2%)
16-12 months ago	132 (25%)	101 (22%)	233 (24%)
Over 12 months ago*	196 (38%)	219 (48%)	415 (42%)
Never	173 (33%)	119 (26%)	292 (30%)
(Missing)	2 (1%)	1 (1%)	3 (1%)

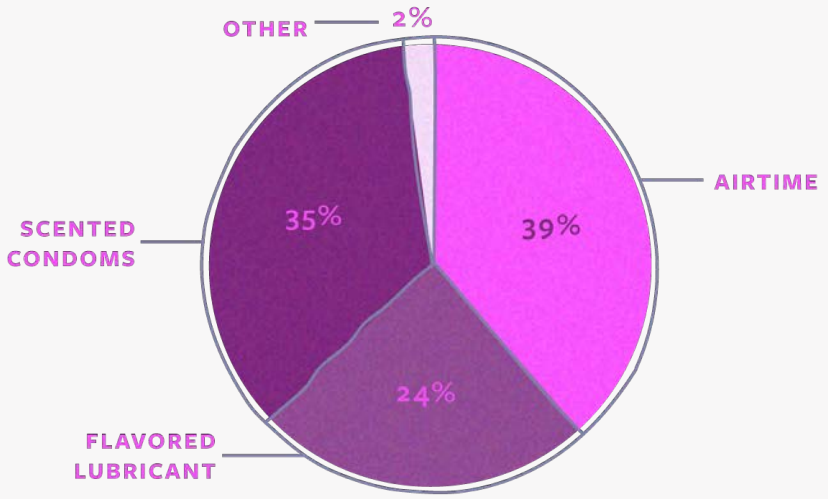
*Asterisk represents a statistically significant difference ($p < 0.01$) between Maaygo and Hoymas in chi square analyses.

Preferred Incentive

YMSM in Kisumu most often chose airtime (39%) and scented condoms (35%) as their preferred incentive. In contrast, YMSM in Nairobi most often chose flavored lubricant (39%). This difference underscores the need to offer multiple incentive options and understand the needs of different sub-groups within the wider YMSM population.

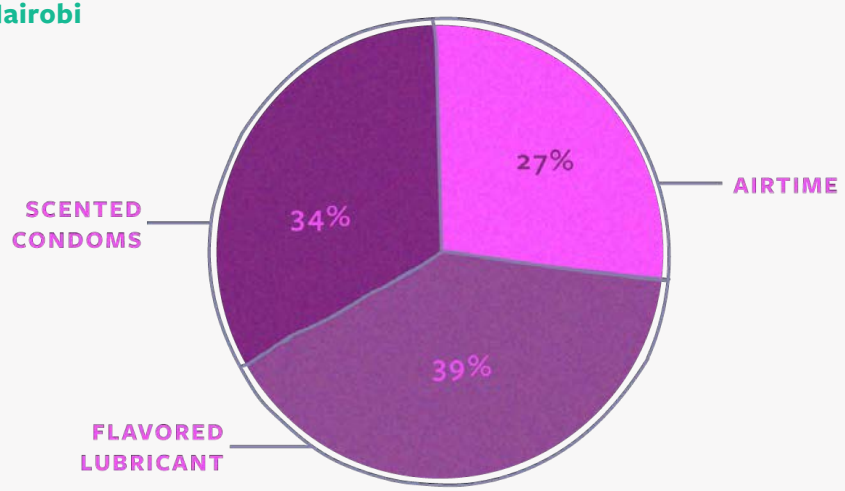
Maaygo, Kisumu

n = 518



Hoymas, Nairobi

n = 455

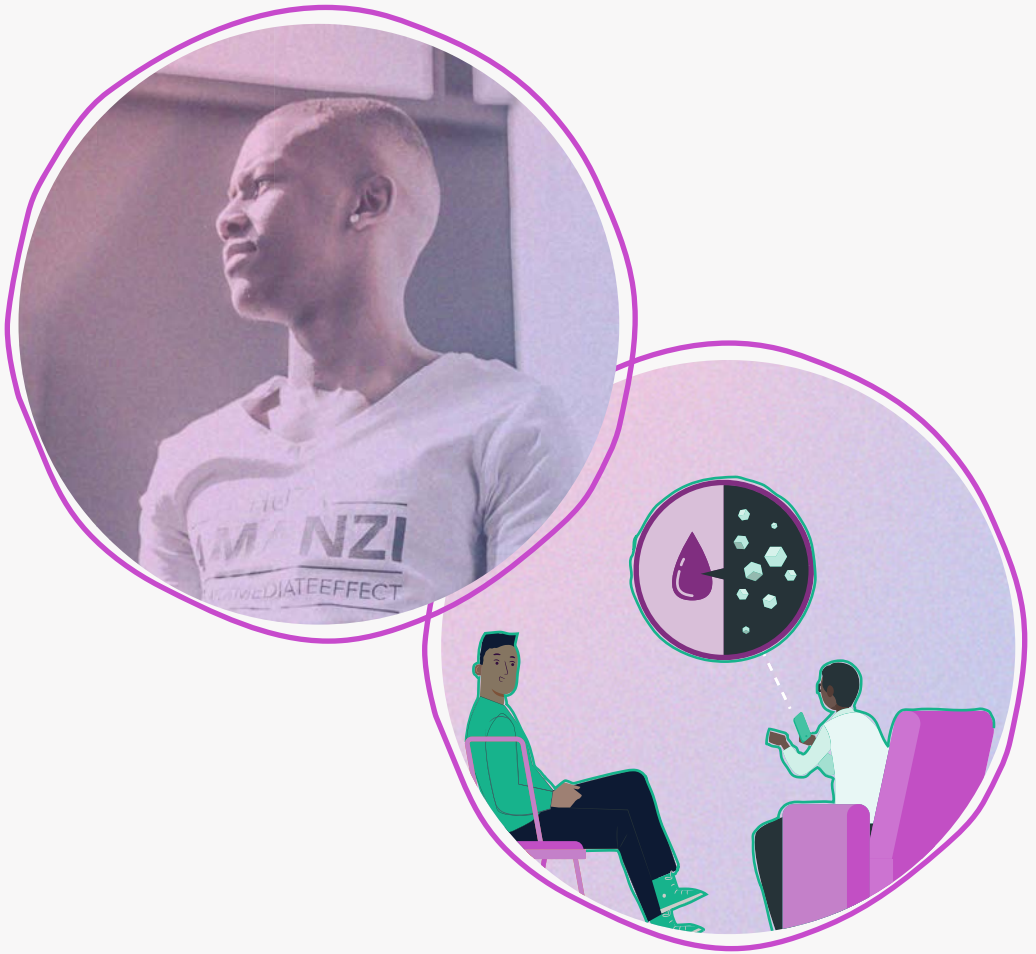


Linkage to Care

Collectively, 27 of the 961 YMSM who sent back their results received a positive HIV test during the Almasi pilot (2.8% of tests), of which 16 participants were from Maaygo and 11 from Hoymas. In total, 24 participants were successfully linked to care, received confirmatory testing, and started ART on-site. The three participants who have yet to be connected to care are currently being followed up with by an adherence counselor.

The 24 participants who initiated ART during the Almasi pilot comprised 85% of the 28 total YMSM clients at either organization who started on ART during these three months. Additionally, 31 participants who tested negative started PrEP during the Almasi pilot, which comprised 67% of the 46 total YMSM newly initiated on PrEP during this time. These proportions are significant considering that the Almasi pilot was implemented in parallel with Maaygo and Hoymas' ongoing conventional outreach programming during June-October 2021.

Of the 28 total YMSM clients at both organizations to initiate ART during this three-month period, 24 (85%) participated in the Almasi campaign.



Comparison to Historical Programming

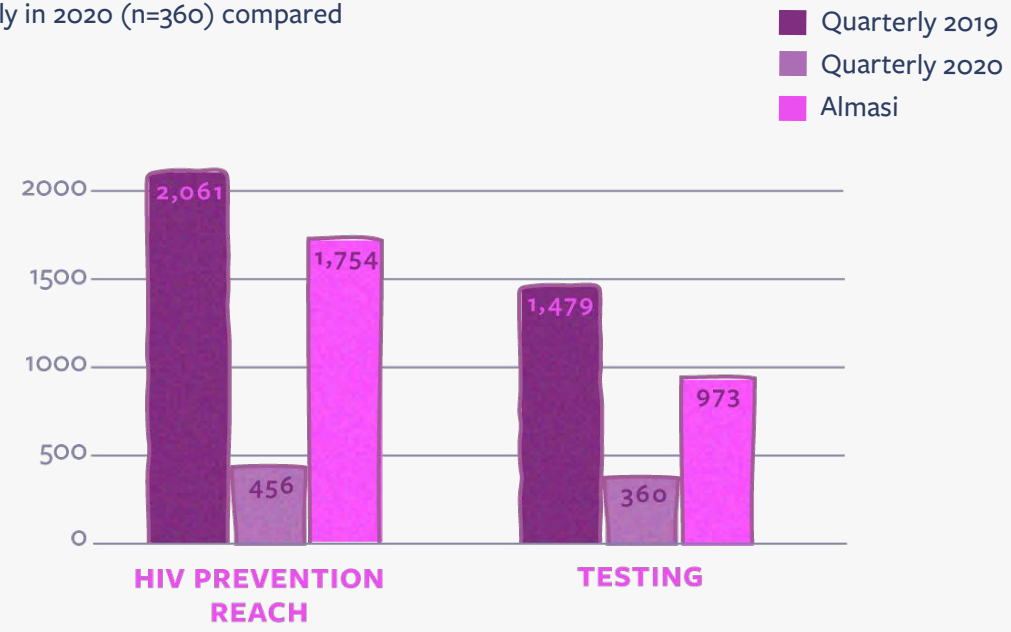
Maaygo and Hoymas' existing outreach approach (pre-Almasi) consisted of two primary strategies: hotspot and virtual outreach. Hotspot outreach was conducted by peer educators who visit hotspots (e.g. bars, clubs) regularly to meet up with their YMSM peers, offer sexual and reproductive health information, provide clinic referrals, and escort clients to drop-in centers for service uptake. Each peer educator carries a caseload of 40-60 clients, with whom they continuously follow up to suggest HIV testing, prevention (or treatment) measures, and other clinical services (e.g. STI testing and counseling).

Virtual outreach consists of posts on Facebook, Twitter, and dating apps that encourage testing and offer sexual and reproductive health education. Online outreach workers also conducted individual outreach to MSM to offer linkage to care. Prior to Almasi, the images and text used in posts were not tailored to YMSM specifically, nor were the posts paid.

Due to the COVID-19 pandemic, 2020 engagement numbers for both organizations were understandably lower compared to previous years. Outreach programs at YMSM hotspots were suspended (and hotspots were often closed altogether), and many YMSM beneficiaries moved to more rural areas. Clinic services were also impacted, as interruptions in normal clinic hours, staffing and equipment shortages, and highly controlled client flow to prevent overcrowding, meant services were more difficult to attain.

In comparison to 2020 quarterly data averaged between both organizations, Almasi demonstrated a considerable increase in the overall HIV prevention reach, the number of tests performed, and linkage to care. In 2020, Maaygo and Hoymas reached a quarterly average of 456 YMSM from existing HIV prevention outreach programming, while Almasi yielded 1,754 YMSM subscribers, representing a 385% increase in programmatic reach. This is in addition to the over 800,000 views and shares of digital ads on social media. Furthermore, there was a distinguishable 270% increase in the number of YMSM who received HIV testing quarterly in 2020 (n=360) compared to Almasi (n=973).

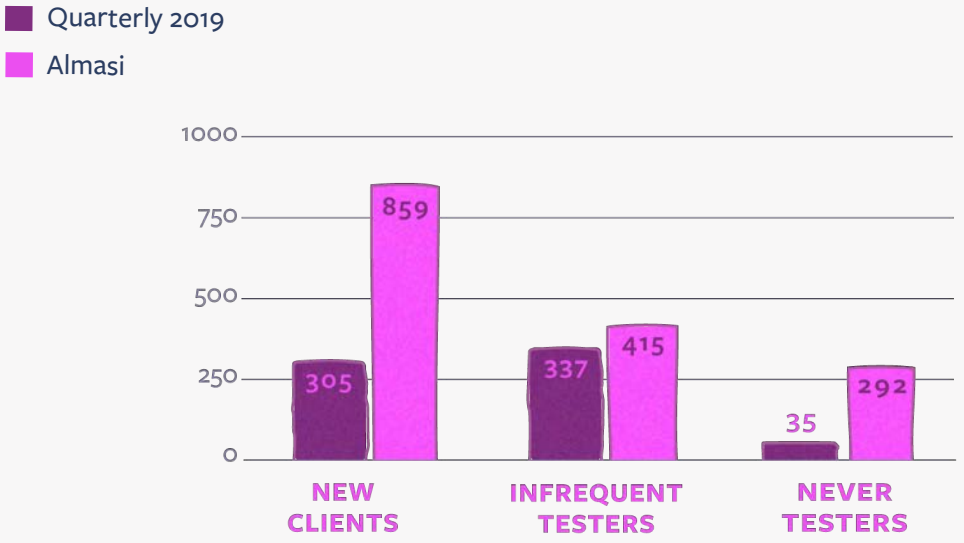
Though the Almasi program did not match pre-COVID reach and testing numbers from quarterly estimates from 2019, it helped Maaygo and Hoymas adapt their programming to COVID constraints by investing heavily in digital advertisement, SMS- and peer-to-peer outreach, and delivery of HIV tests when clinic-based testing was not feasible. This supported the organizations to establish new methods of engagement to use even after the pandemic has subsided, especially for YMSM who are still closeted and/or are unable to come to the clinic for services. The Almasi pilot data show promise that both organizations are able to meet the needs of their communities despite COVID-related barriers, and will be able to build back toward pre-COVID engagement numbers.



Comparison of new clients, infrequent testers, and never testers

An immense success of the Almasi program was the discovery of additional ways to reach new clients and both infrequent and never testers, the numbers of whom have significantly exceeded pre-COVID numbers from 2019.

Specifically, Almasi led to a 265% increase in new clients to either organization, a 123% increase in infrequent testers, and an 834% increase in never testers compared to quarterly data from 2019



Limitations of Data

Given the sensitive nature of the subject matter, we acknowledge the possibility that some data, especially self-report measures (such as test results) may not have been accurately reported. Quality assurance checks were conducted weekly to investigate missing or inconsistent data. Peer educators and clinicians worked diligently to form relationships with YMSM and build trust in order to fortify the fidelity of the data reported. Finally, as this pilot only recently concluded, we have not had a substantial amount of time to follow the cohort of YMSM subscribers to see if they continue to regularly test and link to clinical care.

Summary of Results

Overall, pilot data showed the program to be highly accepted and effective among YMSM. In summary, the Almasi program:

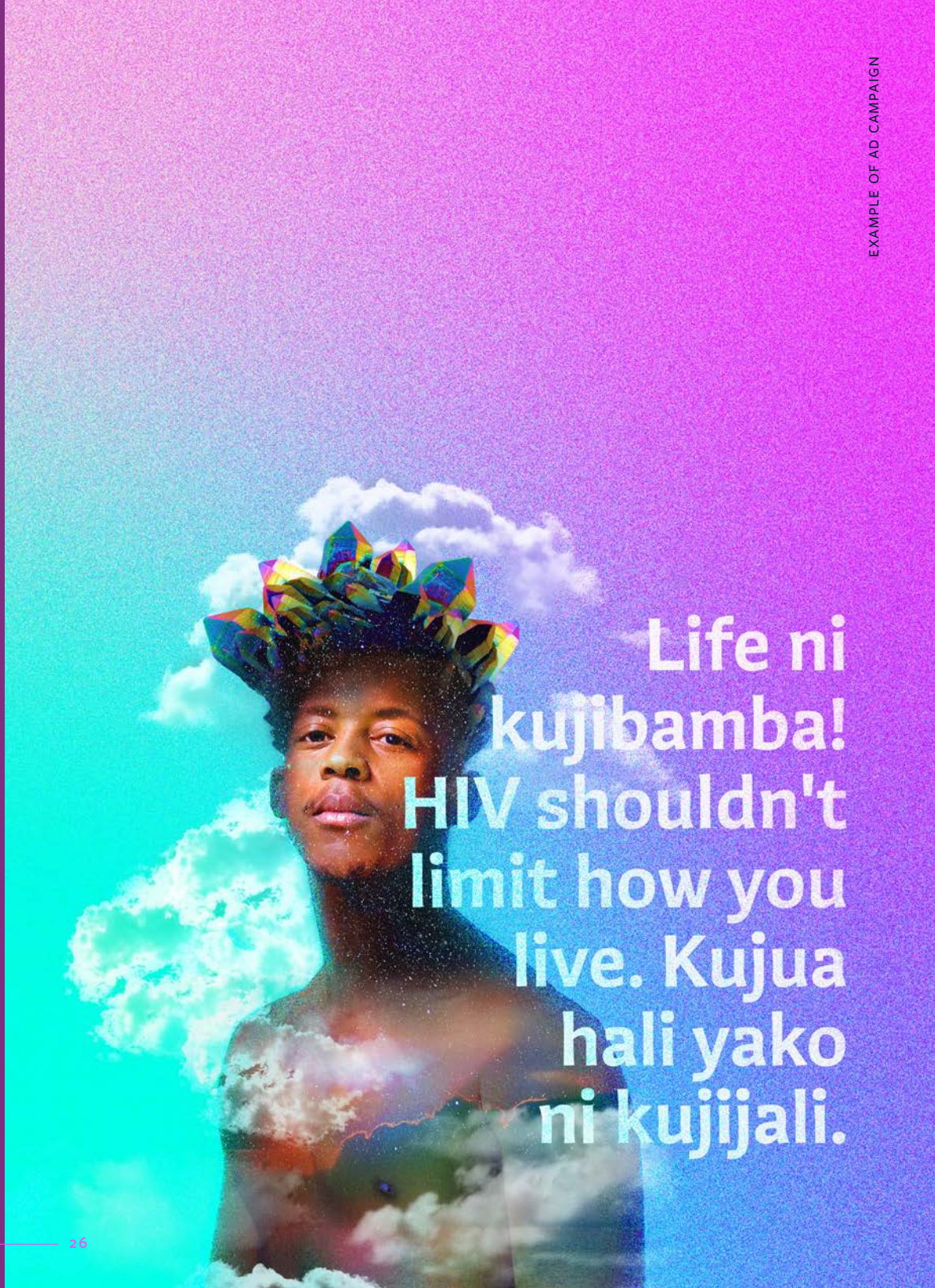
- Received more than 800,000 views of campaign content across digital social media platforms
- Reached 1,754 YMSM through campaign subscriptions
- Tested 973 YMSM for HIV in Kisumu and Nairobi
- Linked and initiated treatment for 24 of 27 HIV-positive YMSM
- Led to a 265% increase in new clients, a 123% increase for infrequent testers, and an 834% increase in never testers compared to quarterly data from 2019 (pre-COVID pandemic)

Challenges & Learnings

The Almasi program offered many insights on how to better engage YMSM at every stage of the testing journey.

Learnings from live prototyping were integrated into the design of the pilot to increase the number of YMSM who subscribed, tested, reported back results, and linked to care.

Maaygo and Hoymas team members conducted qualitative interviews with 50 YMSM who subscribed to the campaign but dropped off at different points on the testing journey. In doing so, the team learned about different challenges related to platform accessibility, message framing, and sensitization around testing positive.



EXAMPLE OF AD CAMPAIGN

Challenge

Increase engagement from YMSM, especially those aged 15-19 and new to HIV testing

1

Solution: Using language on digital ads that does not trigger profile suspension for explicit content

During live prototyping, Maaygo and Hoymas team members posted Almasi campaign advertisements that were subsequently flagged by Facebook and blocked for potentially explicit content targeted to minors.

For the pilot, both organizations submitted requests to reinstate Almasi campaign advertisements with revised language that focused more on health tips than on incentives like condoms and lubricant. Certain posts still referred to "commodities" and emphasized that subscribing to the campaign was free. During the 28-day review process, the revised ads were posted to other team members' accounts that had not been blocked.

Solution: Diversifying social media presence across platforms

Once the campaign messaging was approved for public dissemination, digital ads were posted to various social media platforms, including Facebook, Tik Tok, WhatsApp, Instagram, and Telegram. In addition to posting ads to individual team member accounts, the team posted in closed groups, such as queer WhatsApp and Telegram groups, where YMSM chat with one another in a private space.

Boosting ads on Facebook further improved the campaign's visibility and allowed for team members to interact directly with YMSM who were curious about the campaign through comments and direct messages. Campaign managers were tasked with monitoring posts and responding to questions and comments. Among the 155 YMSM who received a test kit and heard about the campaign through a Maaygo or Hoymas digital ad, 136 (88%) cited Facebook as their source.

Both Maaygo and Hoymas tailored their outreach according to the platforms most often utilized by YMSM in their respective communities. Maaygo observed the most ad shares through WhatsApp (n = 420) and Facebook (n = 375), while nearly all Hoymas ads were shared through Tik Tok (n = 342).

Challenge

Increase engagement from YMSM, especially those aged 15-19 and new to HIV testing

Solution: Recruiting external influencers with a large LGBTQ following

In addition to posting these ads to both organizations' and individual team members' social media accounts, external influencers with a large LBGTQ following were recruited to publicize the campaign. These influencers, most of whom are members of the LGBTQ community themselves and some of whom are living with HIV, are perhaps the most visible resources for YMSM in Kenya seeking information. Influencers play a powerful role in destigmatizing sensitive topics and can use their platform to help elucidate the HIV testing process, starting PrEP or ART regimens, and living successfully with HIV.

On Instagram and Tik Tok, the team advised influencers to make videos on health education, HIV testing, PEP and PrEP, and gender-based violence that would be paired with campaign information. Influencers participated in crafting the messaging of the campaign on their personal pages and periodically reviewed posts for common questions to be addressed in subsequent posts.

Ultimately, influencers proved to be a very successful component of the digital engagement strategy, especially for Hoymas, where nearly 80% of YMSM who received a test kit (n = 361/455) heard about the campaign through an influencer digital ad (compared to 25% of Maaygo; n = 132/518). One influencer in particular, who is a famous LGBTQ advocate living with HIV, counted over 700,000 views on his personal Tik Tok account, which represented nearly 93% of total campaign views on social media.

Solution: Using snowball and peer-to-peer recruitment

Conversely to Hoymas, Maaygo relied more heavily on in-person engagement to reach YMSM outside of their existing network. Using peer educators, Maaygo distributed flyers at frequented hotspots in order to build relationships with potential new clients and to encourage YMSM who had never or not recently tested by addressing challenges related to clinic confidentiality. This technique was especially successful in engaging minor YMSM, who were sensitized on the testing process and asked for written assent to prevent coercion.

Fear of being outed at the clinic in a smaller community like Kisumu prevented many YMSM from testing, so in-person sensitization proved to be a critical factor in alleviating those concerns. Each YMSM directly engaged was then asked to share the campaign with their social networks through a peer-to-peer snowballing strategy. Ultimately, nearly 60% of those who were delivered a test through Maaygo (n = 305/518) heard about the campaign through in-person outreach, compared to only 3% of Hoymas kit deliveries (14/455).

Challenge

Increasing proportion of subscribers who said they were "ready" to test

2

Solution: Increasing platform accessibility

The SMS platform was largely successful in linking YMSM to testing services, but was not universally accessible for this population. Some YMSM do not own their own phone (and borrow a phone to subscribe) or do not have enough airtime to continually engage with the SMS system or peer counselor. Others may have low literacy and prefer to talk over the phone rather than through text messaging. Providing a phone number on the EngageSpark platform where YMSM can contact Maaygo and Hoymas peer counselors before completing the campaign, and arranging callbacks from peer counselors so YMSM can save their airtime, may lower these barriers to participation.

Solution: More sensitization on confidentiality

Furthermore, qualitative feedback reinforced the need for more reassurance about confidentiality and sensitization on what it means to test positive, well before the test is administered. YMSM may not want others to know this part of their identity, and thus expressed reservations when identifiable information (name, phone number, location) was requested on the platform for communication with peer counselors. To this end, we did not ask any additional questions about sexual behavior or lifestyle risks. Assurance that peer counselors will keep information private once subscribers text "ready", and that peer counselors who YMSM may know from their personal lives will not be assigned to their case, is pivotal for ensuring comfort with this kind of platform.

"I'm still struggling with accepting I'm gay. I have been through a lot in the past and thus wouldn't take any questions concerning my sexuality. I wouldn't engage in a gay health talk with a doc. The private options [for testing] as advertised were cool for me."

—YMSM, age 19, last tested 2 years ago

"The messages [on the platform] were very encouraging. I got to learn from the messages. And above all, I loved the fact that I was being engaged by somebody I do not know and my personal details were not inquired."

—YMSM, age 23, last tested 6 months ago

Challenge

Increasing proportion of subscribers who said they were "ready" to test

Solution: More sensitization on what happens if you test positive

Finally, some interview participants ultimately decided not to test because they did not feel prepared to accept a positive test result. This is an especially important consideration for a self-testing campaign where such a result would be ascertained in private instead of with a clinician who could provide immediate comfort and guide YMSM through treatment options.

We learned from participants that the implications of a positive result exceed the burden of of a daily ART treatment regimen; it means facing stigma and discrimination, even in the MSM community. It became clear that testing positive is not just a physical health issue, but an emotional health issue as well.

Fear of testing positive was centered during the development of SBC messaging, but feedback from YMSM during the pilot suggests that messaging may need to be even more direct and reassuring in addressing that fear. Furthermore, feedback suggested that influencer social media posts containing personal stories, health tips, and information on HIV resonated heavily, and could help normalize testing and living well with a positive diagnosis.

"I changed my mind not to have my HIV test results because I wasn't ready to come to be on ART in case I happen to test positive."

—YMSM, age 15, never tested

"I had second thoughts about knowing my HIV status and the kind of life that I would live knowing that I was positive."

—YMSM, age 20, last tested over a year ago

Challenge

Increasing proportion of "ready" subscribers who received test

The delivery of HIVST kits proved to be a significant challenge during the pilot.

3

Solution: Increasing size of team to accommodate Influx of clients

During the live prototyping phase, incoming subscriptions began to outpace the team's ability to contact all subscribers and follow up with those who had not responded after texting "ready". This resulted in only 65% (161/249) of subscribers connecting with peer counselors. Maaygo and Hoymas increased the size of their teams for the pilot to include more sensitized peer counselors who could field subscriptions, build relationships with YMSM, and follow up with those who stopped communicating. This resulted in 92% (980/1070) of subscribers connecting with a peer counselor to arrange kit delivery during the pilot.

Solution: Reorganizing delivery routes to pool dropoffs in public meeting spots

In an effort to address the influx of new clients, the team began to pool HIVST kit requests by geographic area and reorganize delivery routes. Because the team traveled up to 45 km for a single kit delivery during live prototyping, dropoffs were largely made at central meeting points to allow for more clients to receive their test kit in a timely manner. This made the process more efficient and less resource-intensive. Boda (motorcycle) drivers were utilized to increase geographic reach and allow for more peer counselors to conduct deliveries. Clients proposed meeting points that felt familiar and accessible to them. Test kits, lubricant, and condoms were inconspicuously packaged in an envelope or disguised as a gift so as not to draw attention.

As the program grows, both Maaygo and Hoymas plan to leverage existing networks of MSM-led/serving organizations throughout Kenya with whom they can partner so that clients can be referred to care in their geographic area. In the future, it may be possible to arrange dropoffs made by boda drivers alone or by delivery services such as Jumia or MyDawa. However, peer educators play a key role in the delivery process by providing assistance for using the test, reporting back results, and linking to care. A large component of this program is building rapport and relationships with clients, especially those who are minors, have never tested, are still closeted, or have other sensitivites to consider. This is especially important for clients who test positive.

Challenge

Increasing proportion of "ready" subscribers who received test

Solution: Compensating for HIVST kit supply chain disruptions

Nation-wide disruptions to the HIVST kit supply chain caused significant delays in delivery and ultimately led to some YMSM dropping out of the campaign. Qualitative interview participants expressed frustration that a kit was promised to them but never arrived. The team began to offer OTS testing, which requires the YMSM to take an HIV rapid test with a locum HTS provider present. Ultimately, however, only 8% of YMSM (n = 77/973) elected to take an OTS test, likely because the logistics of finding a private place to administer the test and wait for results without drawing attention proved too challenging.

Solution: Pairing clients with peer educators they do not know

An additional consideration for ensuring a secure delivery is pairing clients with peer educators who they do not already know from their personal lives. Qualitative interview participants expressed apprehension that their confidentiality would be compromised during this process, and preferred to be paired with a team member who they did not know to ensure anonymity.

"I loved that the kit was delivered by [only] one person. I never wanted to deal with anyone who knew anything about my sexuality"

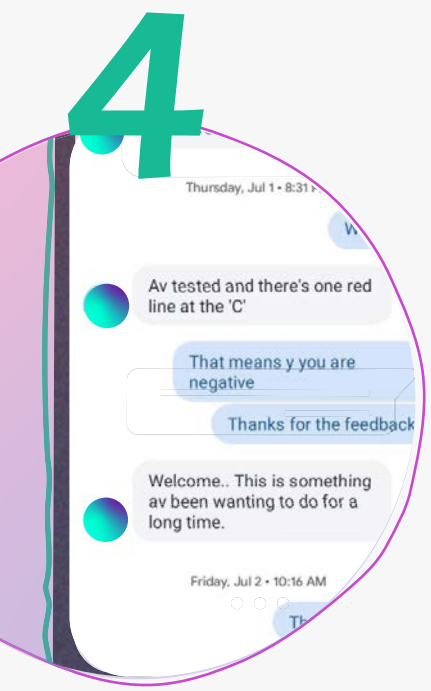
—YMSM, age 17, last tested 6 months ago

"I loved the fact that the kit was delivered by an anonymous person. I [feared] getting the delivery from someone I recognized who can later disclose my sexuality to others."

—YMSM, age 20, last tested 6 months ago

Challenge

Increasing proportion of testers who reported results



Solution: Recruiting clinicians to establish trust, privacy, and confidentiality

Qualitative interviews further reinforced the need for anonymity and confidentiality not just in the dropoff process, but in the subsequent reporting of test results. While reporting is critical for linkage to appropriate follow-up care, additional sensitization encouraging YMSM to share what they felt to be private information became an integral component to the success of the campaign.

Before and during kit dropoff, peer counselors and educators stressed the importance of reporting back results and agreed upon a plan (e.g. call, text) with the client to do so. However, if the client did not report back his test results within 48 hours of delivery via SMS, a clinician called him to inquire. The clinician would continue attempting to reach the client in partnership with the peer educator who delivered the kit for up to three months.

Clinicians were chosen to lead the post-testing process because they were seen as trustworthy and knowledgeable, and would allow for continued anonymity. They also offered for clients to come to the clinic and talk in-person about results and follow-on services, and receive additional condoms and lubricant as incentives. YMSM were offered airtime (Ksh 100, or ~$1 in Kisumu; Ksh 250, or ~$2.50 in Nairobi) to report results.

The sensitization, clinician-led follow-up, and incentives together resulted in 99% (n = 961/973) of results being reported back, a considerable increase from 72% (n = 84/116) during prototyping. Furthermore, a total of 27 positive cases were reported (2.8% of tests administered), an increase of five cases from the same three-month period last year.

"I still feel that HIV results is a personal issue and for that matter it's very private."

—YMSM, age 20, last tested 6 months ago

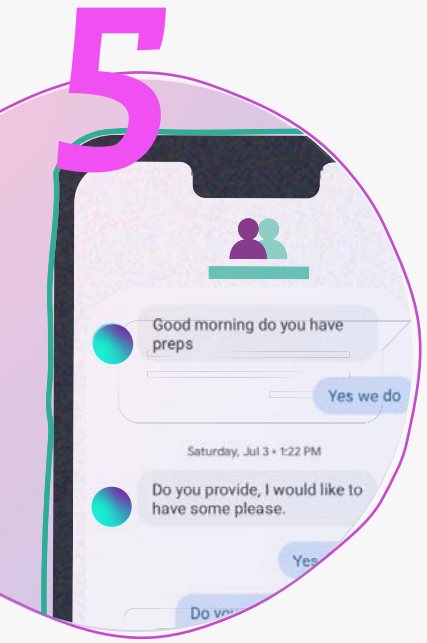
"Why would people be interested in knowing my status?"

—YMSM, age 21, last tested a month ago

Challenge

Increasing proportion of testers who linked to care

Linkage to care requires client tracking infrastructure to support continued follow-up and a reframing of testing from an obligation to an investment in personal health.



Solution: Establishing client tracking cohorts and strengthening relationships with geographic stakeholders

During the kit delivery process, YMSM are asked if they have permanent residence in the area (versus, for example, being in school elsewhere) and can commit for six months of peer counseling and education. If so, YMSM are integrated into peer counselors' outreach cohorts. Peer counselors will follow-up with cohort members on a monthly basis to offer preventative commodities and gather voluntary data about their usage of the commodities to better tailor programming to stated preferences. Using an outreach calendar, peer counselors manage each case, send reminders for quarterly HIV testing, provide information, and link to various health services.

If clients do not meet cohort eligibility, they still receive test kits and clinic services (should they seek them) but are not formally enrolled into the cohort. If possible, clients are linked to facilities closer to their area of residence for continuous follow-up. This process underscores the need for enhancing partnerships with other clinics and stakeholders serving YMSM throughout the country in order to ensure proper linkage and referral for services.

Solution: Communicating HIV prevention as a continuous process

A significant challenge in HIV testing campaigns is linking those who test negative to continuous preventative services. Pre- and post-test counseling with YMSM can help frame prevention as a continuous process rather than a one-time testing incident. Furthermore, regular dissemination of not just tests, but of lubricant, condoms, and PrEP, would help to integrate preventative measures and strengthen peer education efforts. Given the popularity and reach of influencers demonstrated in this campaign, influencers can also help reinforce this message by posting about continuous prevention on their social media pages.

Challenge

Increasing proportion of testers who linked to care

Solution: Framing HIV testing as a celebration, not an obligation

Finally, HIV testing and linkage to care can be framed as an integral component of living a healthy and prosperous life. In continuing to expand their client base, Maaygo and Hoymas may invite YMSM to social events where HIV services are available in order to make testing more accessible and less of a burden. Both organizations could also include non-HIV-related services, such as economic mentorship, in the testing process as added incentives and investments in self-growth.

"I propose that recreational activities be part of linking to care and treatment. It should not just be seen as a routine and something that is mandatory, but rather a joyous activity that we YMSM enjoy."

—YMSM, age 18, never tested

Summary of Learning

Challenge	Solution
Increasing engagement from YMSM, especially those aged 15-19 and new to HIV testing	• Use language that does not trigger profile suspension for explicit content • Show strong social media presence across various platforms • Recruit external influencers with a large LGBTQ following • Use snowball and peer-to-peer recruitment
Increasing proportion of subscribers who said they were "ready" to test	• Increase platform accessibility for those with low literacy or phone access • Increase sensitization on confidentiality and what happens if the test is positive
Increasing proportion of "ready" subscribers who received test	• Increase size of team to accommodate influx of clients • Compensate for HIVST supply chain issues by offering OTS testing • Reorganize delivery routes and pool dropoffs • Pair clients with peer educators they do not know
Increasing proportion of testers who reported results	• Recruit clinicians to establish trust, privacy, and confidentiality • Provide airtime, lubricant, and condoms as incentives
Increasing proportion of testers who linked to care	• Establish client tracking cohorts and strengthen relationships with geographic stakeholders • Communicate HIV prevention as a continuous process • Frame HIV testing as a celebration, not an obligation

Considerations For Program Expansion

Based on the experience of implementing the Almasi program over a four-month period, we have several recommendations for how to expand or replicate the approach in Kenya and beyond.

1. Use mixed physical and digital channels to bridge the gaps of technology access

Social media marketing channels such as targeted Facebook ads and partnerships with TikTok influencers drove a large proportion of engagement with the Almasi program, particularly in Nairobi. These platforms are relatively low-cost and have a wide reach for audiences with digital access, which tends to be concentrated in urban centers such as Nairobi. However, in order to effectively reach YMSM in less urbanized areas of Kenya where smartphone access is less ubiquitous, we recommend using physical ad cards and peer-to-peer snowball recruitment. This mix of digital and physical outreach methods proved important for reaching a diversity of YMSM across Nairobi and Kisumu.

2. Create appealing, confidential alternatives when HIVST are unavailable

The results of the Almasi program indicate a strong preference among YMSM for the convenience and privacy of self-test kits, but disruptions to the HIVST kit supply chain in Kenya are an ongoing risk to program impact. Maaygo and Hoymas offered clinic testing and OTS testing as alternative options when self-test kits were limited or delayed, but most YMSM did not prefer those options. In order to create a resilient approach to program expansion, we recommend improving the speed, accessibility, and privacy of non-HIVST options for YMSM so that testing is not delayed when HIVST kits are not available.

3. Leverage existing local expertise and YMSM peer networks

When looking to expand the Almasi program to other regions of Kenya, we recommend partnering with the existing network of community-based CBOs serving YMSM in order to understand how messaging tone, campaign channels, and HIVST kit delivery methods may require modification to be appropriate in different urban, peri-urban, and rural contexts. Taking a YMSM-led approach to adapting the program design, content creation/delivery, and optimal service delivery points will be important for achieving desired impact. The Almasi model is relatively flexible and can be adapted to local contexts as needed, which is an asset for scalability.

4. Build and sustain strong governmental stakeholder partnerships

Maaygo and Hoymas have strong existing relationships with local and national government representatives, and regularly shared progress updates during the Almasi design and implementation phases. YLabs also engaged government representatives as part of a Technical Advisory Board from the beginning of the project. Maaygo and Hoymas plan to brief the National AIDS and STI Control Programme (NASCOP) on the results and learnings gained from the Almasi program. NASCOP oversees the supply chain for HIVST kits, condoms, and lubricant, so regular communication and coordination with them regarding stockouts will continue to be a critical enabling factor for the feasibility of HIVST programs like Almasi. Working closely with NASCOP will also ensure transparency and compliance with policies for working with young key populations. Liaising with other government entities, including county health management teams, gender and social protection offices, and law enforcement, will further protect YMSM against criminalization and coercion. For example, if the Almasi model expands to more rural regions of the country, these partnerships will be vital to building clinical infrastructure and social support services that will allow more YMSM to receive integrated HIV care.

Conclusion

The Almasi program used human-centered design to explore innovative ways to reach YMSM in Nairobi and Kisumu counties with HIV education, testing, and treatment services. Compared to Maaygo and Hoymas' conventional hotspot outreach and 2019 virtual outreach data prior the COVID-19 pandemic, the Almasi model offered a 265% increase in engagement of new clients (i.e., YMSM who had never engaged with Maaygo or Hoymas in the past), an 834% increase in testing of YMSM who had never tested for HIV, and a 123% increase in testing of YMSM who had last tested more than 12 months ago. These YMSM in particular represent a historically hard-to-reach portion of this already vulnerable key population that has not been engaged in regular testing and care, often due to lack of emotional support, concerns about their sexual orientation being discovered, an inability to come to the clinic, and/or a fear of testing positive.

The HIV self-testing paradigm allows for more convenience, accessibility, and confidentiality compared to traditional testing. Barriers to HIVST kit use include procurement of the kit, emotional preparedness to accept a positive result, and incentivization to report back results to sensitized clinic personnel. The Almasi program delivered kits to YMSM in their chosen locations, provided incentives both during kit delivery and result reporting, and offered education, emotional support, and confidentiality throughout the testing process.

Successful engagement strategies included paid advertisements with YMSM-specific language across various social media platforms that were disseminated through LGBTQ influencers. Pilot data revealed geographic differences in social media reach, campaign subscription channels, and preferred incentives, illustrating the need to tailor programming to YMSM in each community rather than using a one-size-fits-all approach.

Overall, the results of the pilot indicate that the Almasi outreach model is a strong complement to Maaygo and Hoymas' existing hotspot-based programming. It gives both organizations a much broader digital reach, allows them to have agility in offering testing services where YMSM want to receive them, and increases their reach to new YMSM outside of their existing peer cohorts. The success of the Almasi pilot indicates the value of human-centered design in creating programming that engages key populations such as YMSM in the development of programming intended to reach and serve them.

"I was so happy to get the kit delivered to me. It really helped since I was afraid to go to the hospital to get tested. I was so happy to get help come my way."

– YMSM, age 16, last tested over a year ago

APPENDIX: EngageSpark Messaging Tree

Welcome Message	Hello! Thanks for subscribing to the Almasi Project. I am a peer from the LGBTQ community. *Messaging is FREE even if you get a notification on your phone about cost.* Where did you see our ad? Reply... 1: Facebook 2: Instagram 3: Telegram 4: WhatsApp 5: Tik Tok 6: Poster/Flyer If you would like to unsubscribe at any time, reply STOP.

Message #1	Which of these products do you like the most? Reply... 1. Scented condoms 2. Lubes 3. Airtime
Message #2	Be your own boss, we understand that you're young na unapenda [and you love] fun. We're here to help and support you Reply "READY" to get an HIV test and pick up scented condoms and lubes. Or reply "o" to speak to a peer counselor directly at any point

Message #4	Hey, heey, mimi hutake HIV test regularly na that's why naishi bila worries. (Translation: Hey, heey, I take HIV test regularly and that's why I'm living without worries.) Reply "READY" to get an HIV test and pick up scented condoms and lubes. Or reply "0" to speak to a peer counselor directly at any point.
Message #5	Which of these products do Sherehe ni lazima, jipende kwanza. Get a self test kit delivered today and know your HIV status. (Translation: Celebration is a must. Love yourself first.) Reply "READY" to get an HIV test and pick up scented condoms and lubes. Or reply "0" to speak to a peer educator directly at any point.

Questions will progress until YMSM texts "Ready", and then will receive the following message:

"Ready"	Hey it's me again. How would you like to pick up the scented condoms and lubes and get tested? Reply "1" for clinic Reply "2" for delivery of the HIV test kit Not sure or have questions? Reply "0" to speak to a peer directly.
"Clinic"	Sawa! [Okay!] A peer will be in touch with you within 48 hours to set up an appointment at the clinic. :)
"Delivery"	Sawa! A peer will be in touch with you to set up a date, time, and location to deliver your scented condoms, lubes, and HIV test kit within 48 hours. :)
"Speak to peer"	Sawa! A peer will be in touch with you within 48 hours.
*No response**	Are you interested in picking up scented condoms and lubes and getting tested? Reply "1" for clinic Reply "2" for it be delivered by a peer Not sure or have questions? Reply "0" to speak to a peer directly

Thank You!

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