Digital Health Landscape Report

PROMISE 2021 DIGITAL HEALTH LANDSCAPE REPORT FOR INTRODUCTION OF NEW HIV PREVENTION PRODUCTS IN AFRICA

FEB 2022

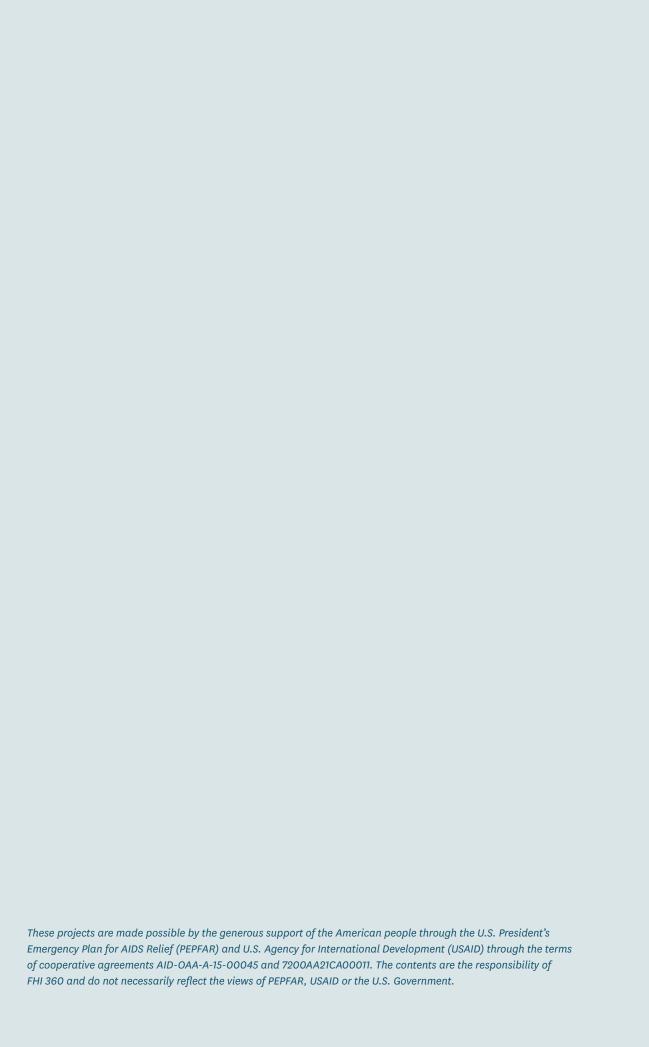
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Executive Summary

To support planning for the introduction of the monthly dapivirine ring in sub-Saharan Africa, a landscape analysis was done to provide an overview of existing virtual channels that can be used to increase awareness and access to the ring. This analysis identified countries where virtual channels are best placed for demand creation and distribution of the vaginal ring and related products for the specified audience(s). This information will be used by the Maximizing Options to Advance Informed Choice for HIV Prevention (MOSAIC) consortium to prioritize and plan activities among its eight focus countries.

The landscape analysis aimed to identify common virtual channels used in each country, estimate the number of users of each channel, and categorize countries into one of three groups based on potential for interventions to use virtual channels to succeed. Users were defined as adolescent girls and young women (aged 15–24), pregnant or breastfeeding women (aged 18–35), female sex workers (aged 18–35), and the male partners of these populations (aged 18–35).

Desk reviews, a country survey, and select follow-up interviews were used to collect information.

Detailed results were provided for eight countries (Eswatini, Kenya, Lesotho, Nigeria, South Africa, Uganda, Zambia, and Zimbabwe). Detailed results included an overview of statistics related to country urbanization, connectivity, female use of virtual channels, and a detailed list of channels describing their purpose and audience size (where available). Any country specific literature and study results were also summarized where available. For each priority country, a recommendation on how virtual channels can be used is provided. For all other countries, summary results with basic statistics on population size for women, literacy rates among women, connectivity (mobile phone, Internet, and social media use), percent of women conducting online transactions, percent of women accessing Facebook/Instagram/Twitter, and total number of past and present mHealth initiatives was provided.

Regionally, mobile connectivity continues to grow in sub-Saharan Africa, reaching 28% of people in the region in 2020. Additionally, areas where people are living that have no broadband network coverage continues to decrease and is now at approximately 19%. Overall, gender and rural-urban gaps persist, with women 37% less likely to use mobile Internet than men. Ehealth and mHealth activities (defined as service promotion and/or delivery using digital approaches) including linking and providing health care services are rapidly expanding within Africa. In countries where data was

available, more than half of the population uses mobile phones on a daily basis, although daily use is consistently lower among women. All countries had access to mobile connections, Internet and social media, with several countries exceeding 100% mobile phone connectivity due to ownership of more than one mobile device per person.

Of the eight countries, one (South Africa) was categorized as high potential, six as moderate potential countries (Eswatini, Kenya, Lesotho, Nigeria, Zambia, and Zimbabwe) while the remaining country (Uganda) was categorized as a nascent potential country.

Country specific findings are found in the <u>focus country pages</u> and a <u>summary table</u> for all other countries are at the end of this document.

Background

Preparing for Ring Opportunities through Market Introduction Support and Knowledge Exchange (PROMISE) was an activity within a larger USAID-funded award, led by FHI 360 in close collaboration with a consortium of partners. PROMISE supported early product introduction planning for the monthly dapivirine ring (PrEP ring) in sub-Saharan Africa. The ring can reduce the chances of HIV infection and is a discreet alternative for those who cannot or do not choose to use daily oral PrEP. In July 2020, the European Medicines Agency (EMA) adopted a positive scientific opinion on the ring for its use among women aged 18 and older in developing countries, opening the door to the next steps in seeking national regulatory approvals for the ring in sub-Saharan Africa.

To support planning for the ring's introduction, a landscape analysis among 16 countries was conducted to provide an overview of existing virtual channels that can be used to increase awareness and access to the ring. This analysis identified countries where virtual channels are best placed for demand creation and distribution of the vaginal ring and related products for the specified audience(s). This information will be used by the MOSAIC consortium to prioritize and plan activities among its focus countries (see box on right).

The landscape analysis had the following objectives:

- Identify common virtual channels used in each country and categorize by purpose (such as channels used for social media, accessing health information, accessing health services, and delivering physical products).
- Estimate the number of users on each channel, segmented by relevant audience demographics, such as by age, gender, and rural/urban (if available).
- Categorize countries into three groups (nascent, moderate, and high) based on the potential for using virtual channels to support demand creation and service delivery.

Additional analysis, where possible, was undertaken and included:

- Describing the impact of these channels on consumer behavior (e.g., with insights on their relative strengths and weaknesses for supporting behavior change and virtual service delivery).
- Identifying opportunities to leverage these virtual channels to support demand creation and service delivery of emerging HIV prevention products.
- Listing additional research opportunities to determine the impact of these channels and tools on consumer behavior.

COUNTRIES OF FOCUS

West Africa

- · Côte d'Ivoire
- Ghana
- Nigeria

East Africa

- Kenya
- Uganda
- RwandaTanzania
- Malawi

Southern Africa

- Botswana
- Eswatini
- Lesotho
- Mozambique
- Namibia
- South Africa
- Zambia
- Zimbabwe

Countries in *italicized bold* are initial focus countries.

Specified Audiences

This landscape examined virtual channels with the intention of identifying those used by women aged 15 to 35 years of age. In particular, interest was given to adolescent girls and young women (AGYW), pregnant and breastfeeding people (PBFP), sex workers, and male partners of these populations. Operational definitions, as well as potential Facebook tags¹ to use when building ad campaigns on Facebook and its related platforms (Instagram), are provided in Table 1. These tags, or combination of tags (denoted by "/") were selected based on information available regarding interests and demographics for each audience^{2,3,4,5,6} as well as their potential to reach a minimum of 100,000 members of the specified audience.

TABLE 1: OPERATIONAL DEFINITIONS AND TAGS FOR AUDIENCES



AGYW

General definition: All adolescent girls and young women aged 15 to 24 years. Includes in- and out-of-school AGYW and/or those working in formal and informal sectors.

Facebook ad manager tags associated with this segment and reaching 100,000 or more individuals*:

- · Some high school/Some university
- · At high school/At university
- New job
- Concerts/Nightclubs/Parties/Dance halls/Bars
- Dating
- Physical exercise
- Cosmetics/Fragrances/Hair products
- · Women's clothing/Shoes
- Online shopping
- Shopping centers

* Facebook ad manager does not allow targeting for anyone under 18 years of age. Size estimation categories based on ages 18–24. Terms elicit 100k+ users when used in isolation or in combination (indicated by "/").



Pregnant or Breastfeeding People

General definition: People aged 18 to 35 years who are pregnant or breastfeeding.

Facebook ad manager tags associated with this segment and reaching 100,000 or more individuals*:

- AGYW tags plus:
- Motherhood
- New parent (0-12 months)
- * Facebook ad manager does not allow targeting for anyone under 18 years of age. Size estimation categories based on ages 18–35. Terms elicit 100k+ users when used in isolation or in combination (indicated by "/").

^{1.} Tags in Facebook are pre-defined search terms used by Facebook to group users based on interests and demographics. These are fixed terms that can help estimate the number of people that can be reached by campaigns targeting people of specific ages and interests.

^{2.} Audience profile report. http://prepaccel.wpengine.com/wp-content/uploads/2019/07/FSW-Audience-Profile-7.16.pdf.

^{3.} Female sex worker profile report. https://accelerator.prepwatch.org/female-sex-workers-profile/

^{4.} Market Intelligence Report: Kenya. https://www.prepwatch.org/wp-content/uploads/2018/05/OPTIONS_AGYW_April2018.pdf.

^{5.} Prepwatch.org. https://accelerator.prepwatch.org/adolescent-girls-and-young-women-profile/

^{6.} Survey of interests among 101 AGYW in ten Kenyan counties. Survey of interests among 101 AGYW in ten Kenyan counties. https://www.prepwatch.org/wpcontent/uploads/2018/05/OPTIONS_AGYW_April2018.pdf.



Female Sex Workers

General definition:

Women aged 18 to 35 years who have sexual relationships in exchange for money or other goods or services.

Facebook ad manager tags associated with this segment and reaching 100,000 or more individuals*:

- · AGYW tags plus:
- Education level unspecified
- Away from family/Away from hometown
- Long-distance relationship

*Facebook ad manager does not allow targeting for anyone under 18 years of age. Size estimation categories based on ages 18–35. Terms elicit 100k+ users when used in isolation or in unison (indicated by "/").



Male Secondary Target Audiences

General definition:

Male partners of primary target audiences (AGYW, PBFP, and female sex

workers) aged 18 to 35 years. These individuals can be gate keepers and influence women's opinions and behaviors.

Facebook ad manager tags associated with this segment and reaching 100,000 or more individuals*:

- Education level unspecified
- Some high school/Some university
- · Away from hometown
- Long distance relationship
- New relationship
- Newlywed
- All parents
- Relationship status: Single or Complicated or Married or In a relationship
- · Physical exercise/Body building
- Alcoholic drink: Beer/Distilled drinks
- Soccer: Football fans

*Facebook ad manager does not allow targeting for anyone under 18 years of age. Size estimation categories based on ages 18–35. Terms elicit 100k+ users when used in isolation or in unison (indicated by "/").

All images downloaded from here.

Methods

Several methods were used to collect information to contribute to the objectives of this analysis. These included: a lite desk review of information regarding virtual channel use across 16 countries, an in-depth desk review of information in 8 focus countries, and an online survey with project partners in these countries to catalog virtual channels used in each country. Follow-up discussions were held with survey participants who reported evaluating the impact of their virtual channels to learn more about their efforts and lessons learned.

TABLE 2: SUMMARY OF METHODS

	Purpose	Data Source(s)	Output
Desk review (lite): All countries	Consolidate existing information to get a general understanding of country-specific penetration of virtual channels, the level of use within countries, and user profiles (general demographics).	We Are Digital 2021 report Facebook Insights & ad manager	Categorization of countries based on channel availability, level of digital use, and percent of women using social media Medium- and high-impact countries to prioritize for future planning and data collection
Desk review (in-depth): Focus countries	A review of literature and more intensive online investigation of channels to identify new sites and determine their impact on consumer decision-making (if available).	Academic literature searches Site validation and snowballing to identify additional channels	Detailed characterization of up to 10 channels in focus countries More in-depth detail on barriers and opportunities for virtual channels in medium- and high-focus countries
Online survey: Focus countries	Obtain more detailed information about existing platforms and user profiles, by country.	Online survey (SurveyMonkey)	Country-specific list of channels Clearer understanding of challenges and opportunities for virtual channel use
Follow-up country meetings and validation	Validation of desk review and online survey results to address information gaps.	Country review of findings Country meeting to discuss evaluation efforts and results	Detailed information regarding identified channels—their use, gaps, potential for integration of HIV products Clear understanding of specific challenges to use of channels to disseminate information and increase access among the target population

1. Lite desk review

A lite desk review was conducted to better understand virtual channel penetration and use in each of the 16 countries. Using the We Are Social's "Digital 2021" report⁷, Facebook ad manager and Insights, GSMA's mHealth Tracker⁸, and WHO's Digital Health Atlas⁹, this exercise helped to categorize countries into high, moderate, and nascent potential. Three proxy measures were used:

- Mobile connections as a percentage of the overall population. This was an indicator of target audience access to the technology needed.
- Percentage of women aged 15–34 who used social media in the last month. This was an indicator of access/use of virtual channels. The program's specified population age range is 15–35, but we used the age range 15–34 to calculate this indicator because this is the range the World Bank population data uses.
- **Country experience with mHealth platforms.** This was an indicator of potential country capacity in terms of human resources and infrastructure to use mHealth approaches.

For each proxy measure, quartiles were calculated to categorize countries. Corresponding color codes and numeric values were given to each nascent, moderate, or priority categories to facilitate the calculation of a final score. Country categories were defined as follows.

- **Nascent potential countries:** Countries where online interventions, social media use, and mobile connections are still emerging/growing.
- Moderate potential countries: Countries where there is adequate penetration in terms of
 mobile connections, social media use is growing, and there is past or present experience with
 online interventions.
- *High potential countries:* Countries where mobile connections are prevalent, social media use is relatively common, and there is in-country experience with past and present mobile/virtual interventions to achieve full geographic coverage of online approaches.

2. In-depth desk review

Once data were consolidated and countries categorized, a validation of channels and a more in-depth description of their target audience was undertaken. This in-depth review was conducted among the eight focus countries to understand the purpose, scope, and impact of virtual channels identified. Where possible, the review tried to find available data on the impact of each platform on client/consumer behavior, describe what each platform is doing well, list gaps, and identify opportunities for using channels for information dissemination or product purchase and/or delivery.

^{7.} Digital 2021. https://wearesocial.com/digital-2021

^{8.} https://www.gsma.com/mobilefordevelopment/m4d-tracker/mhealth-deployment-tracker/

^{9.} https://www.digitalhealthatlas.org/en/-/

3. Online survey

To obtain more country-specific information on virtual channel use, we conducted an online survey that was sent to representatives from in-country programs in all focus countries. The survey was developed on SurveyMonkey and pre-tested among a sub-set of respondents before it was shared with program partners in each country on November 16, 2021. The survey asked about program use of virtual interventions, planned or completed evaluations of virtual channels used, and their knowledge of additional in-country virtual channels that are used by target audiences. The survey is included in the annex.

4. Country follow-up call

The final part of data collection and validation included a call with a sub-set of survey respondents who had indicated a willingness to further discuss their approaches. After discussion with the team, it was decided to focus this discussion among respondents who indicated they had conducted, or were planning, an evaluation of their virtual interventions. The call served to better understand lessons learned and to inform future interventions.

5. Feedback meeting

Once data were collected and analyzed, a draft report was created and shared with the PROMISE team for feedback. This feedback helped inform report finalization as well as identify additional research opportunities to determine the impact of these platforms and tools on consumer behavior.

Results

Results describing rates of connectivity and common platforms are presented here. Country specific findings are found in the <u>focus country pages</u> and a <u>summary table</u> for all other countries is at the end of this document.

Digital penetration in terms of number of mobile phone connections, Internet users, and social media users continues to grow annually across all countries. Urbanization rates are also of interest, because in these areas the use of mobile phones, apps, and use of online services tends to be higher. In the countries included in this analysis, urbanization rates ranged from 18% (Rwanda and Malawi) to 71% (Botswana) with the average rate of 42% across all countries (Table 3).

In countries where data were available, more than half of the population uses mobile phones on a daily basis, although daily use is consistently lower among women. Table 2 summarizes rates of daily use by gender and age. With a few exceptions, daily use of mobile phones is higher among people aged 26–45.

REGIONAL HIGHLIGHTS

- Mobile connectivity continues to grow in sub-Saharan Africa, reaching 28% overall in 2020 compared to 13% in 2014. However, mobile connectivity still accounts for less than half of total connections.
- Coverage gaps, areas where people are living that have no broadband network coverage, continues to decrease, and is now at approximately $19\%^2$.
- Gender and rural-urban gaps persist, with women 37% less likely to use mobile Internet than men^{1,2}.
- Ehealth and mHealth activities, including linking and providing health care services, are rapidly expanding across Africa, and are largely based on country gross national income¹.
- In West Africa, active (high number of interventions, emergence of iHubs for information and mLabs for diagnosis, larger scale private sector initiatives) mHealth approaches are reported in Ghana and Nigeria¹.
- 1. Digital 2021. https://wearesocial.com/digital-2021
- 2. Porter G, Hampshire K, et al. Mobile phones, gender, and female empowerment in sub-Saharan Africa: studies with African youth. Information Technology for Development. 2020; 26(1): 180-193.

TABLE 3: COUNTRY POPULATION, RATE OF URBANIZATION, AND PROPORTION REPORTING DAILY MOBILE USE BY GENDER AND AGE

Country	Country population	Proportion reporting daily mobile telephone use use by both men and women		•	· ·	
	(% urban)*	(% male / female)**	18-25	26-35	36-45	46-55
Botswana	2.4 M (71%)	87% / 88%	93%	91%	92%	84%
Cote d'Ivoire*	26 M (51%)	93% / 80%	88%	88%	87%	9%
Eswatini	1.2 M (24%)	87% / 81%	84%	91%	86%	82%
Ghana	31.4 M (58%)	88% / 80%	84%	88%	83%	82%
Kenya	54.4 M (56%)	88% / 83%	86%	87%	86%	91%
Lesotho	2.2 M (29%)	77% / 74%	85%	82%	83%	68%
Malawi	19.4 M (18%)	54% / 37%	42%	52%	51%	47%
Mozambique	31.7 M (37%)	73% / 61%	68%	67%	70%	64%
Namibia	2.6 M (53%)	91% / 89%	92%	91%	88%	92%
Nigeria	208.8 M (52%)	90% / 74%	82%	85%	81%	78%
Rwanda	13.1 M (18%)	-	-	-	-	-
South Africa	59.7 M (68%)	88% / 86%	89%	90%	90%	82%
Tanzania	60.6 M (36%)	80% / 67%	72%	72%	83%	73%
Uganda	46.3 M (25%)	77% / 57%	67%	72%	67%	66%
Zambia	18.7 M (45%)	67% / 59%	64%	71%	62%	61%
Zimbabwe	15 M (32%)	74% / 67%	74%	77%	76%	77%

^{*}Source: Digital 2021: Global Overview Report. We Are Social, Jan 2021.

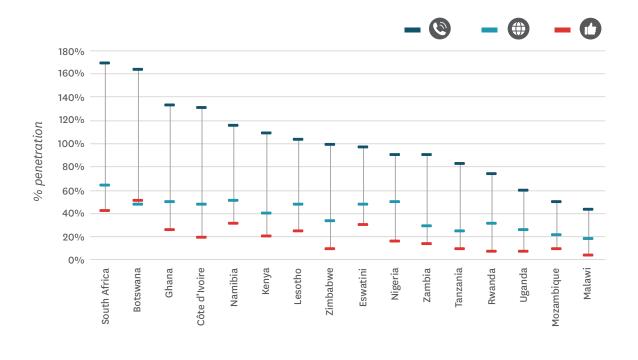
Overall connectivity was based on mobile device connections, Internet use, and social media use across the population aged 18 and over. All countries had access to mobile connections, Internet and social media, with several countries exceeding 100% mobile phone connectivity due to ownership of more than one mobile device per person.

Mobile phone connectivity averaged 101% across all countries and ranged from 169% in South Africa to 43% in Malawi¹⁰. Across all countries, Internet use averaged 39%, with a high of 64% in South Africa and a low of 16% in Malawi. Social media connectivity was lowest in all countries with the exception of Botswana at 51% (Figure 1).

10. Mobile connectivity represents the number of mobile connections vs population, which means mobile connectivity can be higher than 100% because individuals can have more than one registered phone number.

^{**} Source: Afrobarometer, 2018

FIGURE 1: MOBILE (DARK BLUE), INTERNET (LIGHT BLUE), AND SOCIAL MEDIA USE (RED) PER COUNTRY



Globally, the top four social media platforms are Facebook (2.7 billion users), YouTube (2.3 billion users), Instagram (1.2 billion users), and TikTok (1 billion users) and this pattern is similarly reflected in the countries analyzed.

A total of 103 responses to the online survey were received from seven countries: Eswatini (n=12), Kenya (n=9), Lesotho (n=5), South Africa (n=14), Uganda (n=5), Zambia (n=54), and Zimbabwe (n=4). At the time the survey was conducted, Nigeria was not included in the list of focus countries and was therefore not included in the survey.

Three metrics were used to categorize countries into high, moderate, and nascent potential:

- Mobile telephone penetration [Source: We Are Digital, 2021¹¹]: this metric served to measure access to the technologies that would be required for a client to access online material.
- Social media use by women aged 15–34¹² [Sources: World Bank¹³, Facebook ad manager]: this metric served to estimate the penetration of social media among the specified audiences.
- Share of past and present mHealth platforms [Source: <u>GSMA mHealth tracker</u>¹⁴]: this metric served as a proxy of in-country capacity and infrastructure to support virtual interventions.

^{11.} Digital 2021. https://wearesocial.com/digital-2021

^{12.} While PROMISE's population are women between 15 and 35 years of age, World Bank data is only available for the 15 to 34 age category. As a result, Facebook data were queried using this age category.

^{13.} World Bank population figures. https://data.worldbank.org/indicator/SP.POP.1564.FE.IN?view=map

^{14.} mHealth scores were based on past and present mHealth activities listed in the GSMA mHealth tracker. GSMA mobile tracker. https://www.gsma.com/mobilefordevelopment/m4d-tracker/mhealth-deployment-tracker/.

An average was taken across metrics in each country to calculate a final score. Final scores were assigned as: 0–33% for nascent potential countries (colored in red), 34–65% for moderate potential (orange), and 66%+ for high potential (green). Table 4 lists the countries with scores and corresponding shades of color indicating their potential.

The proportion of women using social media was calculated using World Bank population size estimates and Facebook ad manager numbers of women age 15 to 34. The number of women age 15 to 34 with a Facebook account in a country was divided by the total number of women age 15 to 34 in the population to estimate the proportion of women using social media in each country¹⁵.

Of the focus countries, one (South Africa) was categorized as high potential, six were moderate potential countries (Eswatini, Kenya, Lesotho, Nigeria, Zambia, and Zimbabwe), and one (Uganda) was categorized as a nascent potential country.

TABLE 4: COUNTRY CATEGORIZATION BASED ON MOBILE CONNECTIONS, USE, AND EXISTENCE OF PLATFORMS (FROM HIGHEST TO LOWEST POTENTIAL FOR SUCCESS)

	National mobile connectivity	AGYW's social media use	Share of past and present mHealth platforms	Score	Classification
	(% mobile connections / total population)	(% of women age 15-24 using Facebook)	(mHealth platforms in country / total mHealth platforms across all countries)	Average (%)	
South Africa 🔾	169%	98%	24% (98)	97%	High potential
Botswana	164%	95%	3% (13)	87%	(66-100%)
Ghana	133%	53%	8% (31)	65%	
Namibia	115%	61%	1% (3)	59%	
Cote d'Ivoire	131%	38%	2% (8)	57%	
Eswatini 🔍	97%	75%	0% (1)	56%	
Kenya 🔍	109%	42%	12% (50)	54%	Moderate
Lesotho 🔍	103%	58%	1% (3)	54%	potential (34-65%)
Nigeria 🔍	90%	32%	12% (48)	45%	
Zambia 🔍	90%	31%	4% (18)	41%	
Zimbabwe 🔍	99%	11%	1% (5)	37%	
Tanzania	83%	20%	7% (30)	37%	
Rwanda	74%	15%	0% (0)	30%	
Uganda 🔍	60%	12%	13% (54)	28%	Nascent
Mozambique	50%	20%	4% (18)	25%	potential (0-33%)
Malawi	43%	7%	8% (33)	19%	,

Q Focus countries

Note: Colors indicate potential with red indicating nascent potential, orange moderate potential, and green high potential. Shades are used to indicate the level of potential within each category, with a lighter shade indicating a lower position within the range and darker shades indicating a higher position within the range.

15. World Bank, 2019. https://data.worldbank.org/indicator/SP.POP.1564.FE.IN?view=map. Accessed 1/11/2022.

Focus country results

Eswatini (Moderate potential)

Just under 25% of Eswatini's population live in urban areas. Mobile connectivity is high, reaching 97%, and social media use is growing relatively faster compared to the annual growth of mobile connections and Internet users (see table below). Facebook ads manager estimates that 330,200 men and women aged between 15 and 35 years of age can be reached through ads on their platforms. This includes approximately 156,100 women aged 15–35 and 81,700 AGYW. Data from Facebook Insights shows that 47% of Facebook users aged 18–35¹⁶ are in Manzini while 27% are in Mbabane; no other city in Eswatini reaches 10% or more of the population. Facebook users in Eswatini tend to be within the age ranges of 18 to 34, with users greatly decreasing after age 35.

TABLE 5: ESWATINI KEY RESULTS FOR 2021

National digital penetration (and % growth in the last year) *		AGYW Population **		Other data for women *		
Mobile	Internet	Social media	Total AGYW	% AGYW with Facebook profiles	% Women conducting online transactions	Literacy rate
97% (+2%)	47% (+1%)	30% (+35%)	210,662	75%	No data	89%

^{*} We Are Digital, 2021. https://datareportal.com/reports/digital-2021-eswatini?rq=Eswatini

https://data.worldbank.org/indicator/SP.POP.1564.FE.IN?view=map

Recommendation

In Eswatini, efforts leveraging digital platforms are more likely to succeed in urban centers where the majority of users are located. The high literacy rate among women, the high use of social media (as measured by the percentage of Facebook profiles among AGYW), and the annual growth in social media use indicate digital platforms may be a useful approach to reach and engage AGYW.

TABLE 6: mHEALTH INFORMATION, SERVICE, AND DISTRIBUTION CHANNELS IN ESWATINI

Site name	Description				
Demand creation: sites, apps, and influencers that provide information to target audience					
Love Eswatini	Facebook page with over 4,000 followers and frequent updates.				
The rock of hope Eswatini	Facebook page for a local organization focusing on healthy living, advocacy, and human rights. Active page with over 4,500 followers.				

^{16.} Facebook Insights is only available for Facebook users 18 years and older.

 $[\]hbox{** Calculated using World Bank population figures and Facebook Ad Manager data. World Bank, 2019.}$

Site name	Description
<u>U-Report</u>	Local organization with Facebook page focusing on community engagement and raising awareness about rights and violence. Active page with over 1,000 followers. In addition to the FB page, they also have an interactive SMS based platform with approximately 28,000 users.
Together realizing Ubuntu Eswatini	Facebook page promoting HIV prevention and linkages to True Eswatini. Active page with approximately 2,300 followers.
Hope Eswatini	Facebook page with over 3,000 followers. Posts relating to HIV prevention and linkages to True Eswatini.
Tune Me	A multi-country United Nations Population Fund (UNFPA) project, the site is live in Eswatini as well as Zambia, Malawi, Zimbabwe, Namibia, Botswana, and Lesotho. It targets young adults aged 18-24 years old and provides information on sexual and reproductive health, COVID-19, and other topics. Users can share experiences, seek information, and find providers. Has an accompanying Facebook page and can be accessed free of mobile data charges and in areas with low connectivity.
Honey Eswatini	Facebook page with over 4,000 followers promoting HIV prevention and True Eswatini site.
PrEP Yourself for an HIV-Free generation	Facebook page started by FHI360 during the PrEP demonstration studies for demand-creation. Has approximately 1,000 followers; last posting was in February 2021.
Technology based HIV intervention for the youth (THPPY)	Project aimed at leveraging technology to enhance HIV prevention for young people. Newly launched with 600 followers, allows people to post their HIV-related stories and experiences. In the process of developing an interactive app; it is unclear what this app will do but there are plans to present to partners in March.
Family Life Association of Eswatini	Facebook page for International Planned Parenthood Federation member in Eswatini. Has approximately 5,700 followers. Last post was in December, 2021.
Service provision: sites and and other telemedicine ser	apps that provide health services to clients. This includes online counselling, booking, vices.
True Eswatini	FHI 360-supported ORA site to access HIV prevention and care services.
Voice of our voices	Organization focused on sex workers. Priority areas include advocacy and protection of sex worker rights. Links sex workers with service providers and distributes health commodities to sex workers.
Product/Commodity delive	ry: sites and apps that deliver products to clients' homes or other tertiary locations
Sheba Pharmacy	Online and physical pharmacy with free delivery (terms and conditions apply). WhatsApp chat for common questions link clients to pharmacists. Also have active Facebook page with 369 followers where they post announcements and information (https://www.facebook.com/shebachemist/).

Kenya (Moderate potential)

Kenya has an urbanization rate of 28% and the majority of social media use is highly urbanized. Facebook Insights data reports that 51% of the female Facebook and/or Instagram users aged between 18 and 35 are in Nairobi, 8% in Mombasa, and 4% in Eldoret.

According to We are Digital's 2021 Kenya report, Snapchat is a common app used among the target population, with approximately 28% of all users aged 16-64 reporting having used it in the last month, of those users, 72% were women.

TABLE 7: KENYA KEY RESULTS FOR 2021

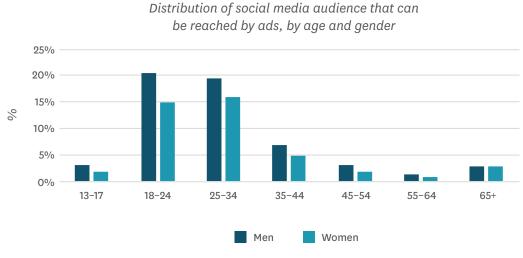
National digital penetration (and % growth in the last year) *				Other data for women *		
Mobile	Internet	Social media	Total AGYW	% AGYW with Facebook profiles	% Women conducting online transactions	Literacy rate
109% (+11%)	40% (No data)	20% (+25%)	9,795,808	42%	20%	78%
* We Are Digital, 2021. https://datareportal.com/reports/digital-2021-kenya?rq=Kenya						

^{**} Calculated using World Bank population figures and Facebook Ad Manager data. World Bank, 2019.

https://data.worldbank.org/indicator/SP.POP.1564.FE.IN?view=map

Brand discovery most often occurs through ads on social media (58%), but this is closely followed by more traditional channels like television (57%). Retail and brand websites are also common places for Internet users aged 16-64 to discover new brands or products (56% and 49%, respectively).

FIGURE 2: SOCIAL MEDIA PROFILE, KENYA



Source: We are Digital 2021.

The Optimizing Prevention Technology Introduction on Schedule (OPTIONS) Consortium conducted a market intelligence report in 2018 among 101 AGYW in Kenya to better understand their attitudes, beliefs, and behaviors regarding HIV to inform communication approaches to increase uptake of oral PrEP¹⁷. This work identified the following points regarding AGYW in the study:

- Values include being alive (59%) and in good health (53%)
- Have a desire to fit in with their friends and may wish to avoid conflict in relationships
- Interested in dating and relationships are highly valued
- Low PrEP knowledge (9%)
- Top media-based sources of health information: radio (52%), TV (47%), and social media (30%)

The GSMA mHealth tracker and WHO's Digital Health Atlas both list 49 past and current mHealth interventions. These range from efforts to improve medical record systems to projects for increasing awareness and providing access to care.

Recommendation

Because of the large number of interventions, the capacity within Kenya to support future efforts is most likely higher than other countries. In this setting, digital and online interventions may work to raise awareness and engagement in urban and peri-urban areas.

TABLE 8: mHEALTH INFORMATION, SERVICE, AND DISTRIBUTION SITES AND APPS IN KENYA

Site name	Description					
Demand creation: sites, ap	Demand creation: sites, apps, and influencers that provide information to target audience					
oky app	An app for girls and by girls to track their menstrual periods and get information dispelling common myths.					
Auntie Jane	Hotline for sexual and reproductive health information, run by women and targeting Kenyan women.					
NTV Kenya (#Betterliving)	Lifestyle television show on NTV that also covers various health talks including sexual reproductive health					
Love Matters Africa	Information on sex and sexual health for young people in Kenya. SOS line and sections discussing love/relationships/reproductive health/HIV/GBV.					
<u>Uzima Project</u>	Focus on rural communities. Implemented by Penda Health and Grameen Foundation. Sends targeted health communication to clients.					
MTV Shuga Alone Together	Website with a blog and series of 5-minute videos where people discuss different issues they are facing. Includes links to services for violence, reproductive health, COVID-19, and mental health.					
Youth Advisory Champions for Health	Functional in eight counties including Mombasa, Nairobi, Kisumu, Kiambu, Siaya, Migori, Kilifi and Homabay with Twitter, Facebook and Instagram accounts. Post information on HIV prevention, sexual reproductive health and other health and social issues relevant to youth. Mombasa site has 1,000 followers. Formation spearheaded by LVCT Health (https://www.facebook.com/yachmsa)					
Caroline Mutoko YouTube	YouTube channel focused on women, motherhood, and parenting. Has 121,000 subscribers. Videos cover questions about health, gender, home decoration, and general and social issues. Most videos have approx. 2,000 views. Posts several times a month.					

17. Survey of interests among 101 AGYW in ten Kenyan counties. Source: https://www.prepwatch.org/wp-content/uploads/2018/05/OPTIONS_AGYW_April2018.pdf

Site name	Description
Service provision: sites and booking, and other teleme	d apps that provide health services to clients. This includes online counselling, edicine services.
one2onekenya.org	Pleasurable content on sexual and reproductive health, relationships, HIV. Content created by and for young people. Has an integrated digital platform that reaches more than 6million people annually in Kenya and beyond. Hosted by LVCT Health.
OnetoOne hotline (1190)	Nationally recognized hotline for young people to get comprehensive and up to date information on HIV, sexual and reproductive health, GBV, mental health, and relationships. Hosted by LVCT Health.
QuickRes	Online HIV service booking and case management.
Ask Nivi	Free chatbot that answers questions about birth control and contraceptives in Kenya. Using Whatsapp, it provides information about contraceptives, gives recommendations on family planning, and helps users find clinics to access services and commodities. Free of charge. Partnership with Pathfinder and MyDawa, Kenya.
M-Chanjo	M-Chanjo is a mobile health application that seeks to reduce the rate of child mortality. The system works by sending automated reminders via SMS to parents to keep them informed on any future immunization dates and appointments for their children. The system allows health officials to create and store the immunization records of a newborn child, and update immunization schedules with every subsequent visit. Twitter page looks inactive with less than 100 followers.
<u>iPush</u>	Amref Health Africa and PharmAccess partnership focusing on women of reproductive age. iPush provides health knowledge on maternal and child health but also includes a health wallet that helps women and families in low-income communities save for health expenditures.
M-TIBA	Owned by PharmAccess, is a digital platform for inclusive health care that enables people to save, send, receive, and pay money for medical treatment through a mobile health wallet on their phone.
WelTel Health	SMS platform that provides 2-way testing services between providers and clients. Original focus was HIV-positive patients. Clients are sent weekly text messages inquiring about their well-being; when patients respond that they have a problem, a health worker calls back to assist them. WelTel also provides health-related information to the public, designed to facilitate behavior change; is able to track diseases in an area or population; supports remote data collection; gives long-distance support to health workers; and facilitates logistics of moving health related products.
Frontline SMS Kenya	Open-source software for text messaging, supports a wide range of areas and had an activity for supply chain management aimed at avoiding drug and commodity stock outs. Not very active Facebook page with just under 3,500 followers. (https://www.facebook.com/FrontlineSMS/).
The Challenge Initiative (TCI)	Works across Africa, in Kenya established a network of pharmacies in Mombasa to increase access to contraceptives among young Kenyans.
Product/Commodity deliver	ery: sites and apps that deliver products to clients' homes or other tertiary locations
<u>MyDawa</u>	Online pharmacy in Kenya, delivers goods within 4 hours in Nairobi, within 24 hours for the rest of Kenya.
Delivery Pharmacy	Mombasa-based but also provides deliveries to other parts of the country (Nairobi, potentially others). Online one-on-one consultations with pharmacists for prescription medications, in-store shopping, refill reminders, educational articles, and delivery to people with accounts. Have online beauty advisers.
Super Cosmetics	Largest variety of cosmetics and beauty products in East Africa. Has Facebook page with 13,500 followers and Twitter that actively posts information on new products and health/beauty messaging. Clients can order through WhatsApp for delivery.

Lesotho (Moderate potential)

Close to 30% of Lesotho's population live in an urban setting and mobile connections are over 100%, indicating people have more than one mobile telephone. Social media grew by almost a quarter in the last year, representing about 100,000 new social media users. Approximately 58% of the female population aged 15–34 have Facebook or Instagram accounts, but there is low past and current experience with mHealth interventions, which may be an indicator of limited capacity or other barriers to their implementation.

TABLE 9: LESOTHO KEY RESULTS FOR 2021

National digital penetration (and % growth in the last year) *			AGYW	Population **	Other data for wo	men *
Mobile	Internet	Social media	Total AGYW	% AGYW with Facebook profiles	% Women conducting online transactions	Literacy rate
103% (-8%)	48% (+9%)	25% (+23%)	388,104	58%	8%	78%

 $[\]hbox{*We Are Digital, 2021. $https://datareportal.com/reports/digital-2021-lesotho?} rq=Lesotho$

Recommendation

Lesotho's categorization as a moderate potential country is driven by its high level of mobile phone penetration. It's high female literacy rate and use of Facebook among AGYW make digital approaches promising for this population. Pilot projects in urban settings to inform roll out would be beneficial.

TABLE 10: mHEALTH INFORMATION, SERVICE, AND DISTRIBUTION SITES AND APPS IN LESOTHO

Site name	Description		
Demand creation: sites,	apps, and influencers that provide information to target audience		
PSI Lesotho Facebook page with announcements relating to COVID-19 and HIV programming. Over 6,000 followers.			
Sesotho Media & Development	Facebook page for local organization that addresses stigma and discrimination through film screenings. They also sponsor the annual Lesotho Film Festival (last film festival was in 2019). Page is active with just over 5,800 followers. (http://www.sesothomedia.org/?fbclid=lwAROAJDj2LOW2QhzKiqw9nw7VfgswM8wFyJmOWsVITTLIrdmxGNKOY4pu9VY)		
Karabo Ea Bophelo Facebook page	Facebook page for USAID-funded project with close to 3,600 followers; moderate to low activity. Provides information targeting OVC, adolescent girls and young women on HIV prevention and resources.		
Confessions for yummy nutty mommies	Facebook page helping mothers through pregnancy, motherhood and healthy living. Over 4,000 followers.		
Take me to my crush	Youth-focused You Tube channel focusing on issues and challenges faced by young people. Has approximately 4,000 followers.		
Pelo e ja Serati (TV program)	TV show on Lesotho's National Broadcasting Service. Addresses issues and relationships among young people.		

^{**} Calculated using World Bank population figures and Facebook Ad Manager data. World Bank, 2019.

https://data.worldbank.org/indicator/SP.POP.1564.FE.IN?view=map

Site name	Description			
Lesotho Network of People Living with HIV/ AIDS Facebook page	acebook page of Lesotho Network of People Living with HIV/AIDS (Lenepwha), used to sseminate information of current/past/future events supported by the organization. oderately active with close to 4,000 followers. Has a second page (https://www.facebook.pm/lenepwha1) with /lenepwha1 having 5,800 followers. It is also moderately active.			
Service provision: sites a and other telemedicine	and apps that provide health services to clients. This includes online counselling, booking, services.			
Vista Life Sciences	Supports HIV/AIDS treatment and management in Lesotho, Africa. The Vista mHealth™ syste allows medical workers to ensure quality and continuity of care by using mobile technology t access electronic records for HIV/AIDS patient assessments and interventions. Includes more than 20,000 client encounters.			
QuickRes	Online service booking and case management app.			

Nigeria (Moderate potential)

Nigeria continues to observe growth in the number of mobile connections, Internet users, and social media users (see table below). About half of the country's population lives in urban areas and about 3% of the female population aged 15+ makes online purchases. The top ecommerce category is fashion and beauty, with \$1.82 billion USD spent in 2020.

Past studies have spoken of the potential for mHealth interventions in Nigeria, particularly within reproductive and sexual health programs where past experience has demonstrated promise¹⁸. At the same time, mixed method studies among health care provider attitudes towards mHealth show that there is a willingness and interest in adopting these approaches^{19, 20}.

TABLE 11: NIGERIA KEY RESULTS FOR 2021

National digital penetration (and % growth in the last year) *		AGYW Population **		Other data for women *		
Mobile	Internet	Social media	Total AGYW	% AGYW with Facebook profiles	% Women conducting online transactions	Literacy rate
90% (+10%)	50% (+22)	16% (+22%)	33,530,751	32%	3%	53%

^{*} We Are Digital, 2021. https://datareportal.com/reports/digital-2021-nigeria?rq=Nigeria

Recommendation

In Nigeria, there seems to be a relatively high potential for urban-based virtual interventions, which could extend to peri-urban settings as well. However, it would be important to pilot these among the target population given the lower-than-expected percentage of women accessing Facebook and the female literacy rate just above 50%. This could indicate less mobile access and use among the target population.

TABLE 12: mHEALTH INFORMATION, SERVICE, AND DISTRIBUTION SITES AND APPS IN NIGERIA

Site name	Description		
Demand creation: sites, a	Demand creation: sites, apps, and influencers that provide information to target audience		
Airtel Wellbeing	Airtel partners with USAID and others to provide education and health information to Nigerians. Airtel Wellbeing is described in the GSMA mHealth tracker as a daily service that sends health messages for 5N/day. Also had a project called "Dial-a-Doctor" that offered real-time help to pregnant and breastfeeding women; subscribers could call a doctor and were charged N3O/minute. Recently conducted an HIV awareness campaign (https://brandcom.ng/2017/01/community-applauds-airtel-nigeria-campaign-hivaids/)		
FrontlineSMS	FrontlineSMS is open-source software used to send messages. In Nigeria, it's been used by Management Sciences for Health (MSH) focusing on messaging for women and children and was also used in the 2007 presidential elections.		

 $[\]textbf{18.}\ \underline{\text{https://reproductive-health-journal.biomedcentral.com/articles/10.1186/s12978-021-01069-z}$

^{**} Calculated using World Bank population figures and Facebook Ad Manager data. World Bank, 2019. https://data.worldbank.org/indicator/SP.POP.1564.FE.IN?view=map

 $^{19. \} https://www.researchgate.net/publication/321815070_A_Ground-Up_Approach_to_mHealth_in_Nigeria_A_Study_of_Primary_Healthcare_Workers'_Attitude_to_mHealth_Adoption$

^{20.} https://www.joghr.org/article/13507-using-mobile-phones-to-promote-maternal-and-child-health-knowledge-and-attitudes-of-primary-health-care-providers-in-southwest-nigeria

Site name	Description
MyQuestion and MyAnswer	Part of the "Learning about Living" project based in Abuja. Focus on young people by providing answers to common questions about HIV and reproductive health by SMS, landlines, and online. Unclear if still active, launched in 2007. May have merged with "Education as a Vaccine." (https://www.evanigeria.org/our-projects/my-question-and-answer/)
Civil Society for HiV/AIDS in Nigeria (Cishan)	Facebook page providing information on HIV/AIDS with 1,500+ followers.
Support for people living with HIV/AIDS	Facebook page providing information on HIV/AIDS and resources for people living with HIV. Has over 1,200 followers.
NigeriaHIVinfo.com	Active Facebook page providing information on HIV/AIDS. Has 1,300+ followers.
Sweet Mother's Worldwide	Private Facebook page focusing on mothers. Over 197,000 members, and actively posting (850 posts in the last month).
<u>Vas2Net</u>	VAS2Nets mHealth services are accessible via various platforms including SMS, IVR, USSD, Web, Mobile App, etc. Provides specialists to give advisory services, health promotion and sensitization via mobile technology. Had a project called "Call a DR" where clients could call in to speak to a doctor in a group or one-on-one. Also did an eLearning pilot training for family wellness training for community pharmacists.
YabaLeftOnline	The top page among 13% of women aged 18-35 who use Facebook in Nigeria. Entertainment, news, comedy & controversial platform, currently also has COVID-19-related information on their homepage.
Service provision: sites and and other telemedicine ser	I apps that provide health services to clients. This includes online counselling, booking, vices.
Hello Doc	Has 8,000+ verified doctors and is advertised as the biggest online community of doctors in Nigeria. Doctors are using the app to connect with diagnostic companies, pharmacies, hospitals, placement services, conventions, and more. Helps providers manage patients and creates electronic medical records.
<u>OneHealthNG</u>	Allows clients to purchase drugs, consult a doctor, and book diagnostics online.
ORA	Online service booking and case management app. (coming soon)
Product/Commodity delive	ry: sites and apps that delivery products to clients' homes or other tertiary locations
Jumia Food	Food, alcohol, merchandise, and pharmacy delivery in Lagos, Abuja, Ibadan, and Port Harcourt. One of the top e-commerce sites in the country.

South Africa (High potential)

South Africa is the only country scoring "high potential" across the three metrics used to categorize countries. Mobile connections indicate most people have more than one mobile phone, and social media use by the target population is close to 100%. South Africa has also had close to 100 past and present mHealth-related projects which could indicate country capacity to implement as well as target population familiarity with these.

The 2021 We Are Social report presented some of the following findings:

- 98% of Internet users own a smartphone
- Average time spent using Internet (daily): 10 hrs, 6 min
- Average time spent watching TV: 4 hrs, 8 min
- Average time spent on social media: 3 hrs, 32 mins

Snapchat is one of the top ten most common social media apps used in South Africa (excluding messenger and chat apps), with 30% of Internet users between the ages of 16 and 64 reporting use in the last month. Women make up 79% of all Snapchat users in South Africa.

Internet users find out about new brands or products through ads on TV (54%), ads on social media (47%), retail websites (44%), and word-of-mouth (43%)²¹.

TABLE 13: SOUTH AFRICA KEY RESULTS FOR 2021

National digital penetration (and % growth in the last year) *		AGYW Population **		Other data for women *		
Mobile	Internet	Social media	Total AGYW	% AGYW with Facebook profiles	% Women conducting online transactions	Literacy rate
169% (+0.8%)	64% (+5%)	42% (+14%)	10,132,203	98%	12%	87%

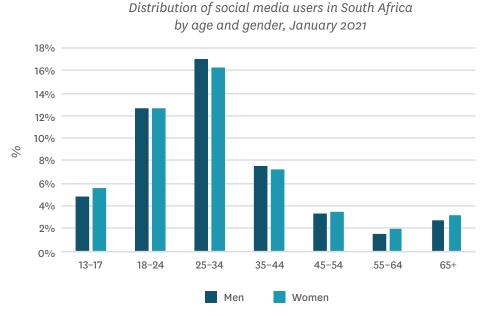
^{*} We Are Digital, 2021. https://datareportal.com/reports/digital-2021-south-africa?rq=South%20Africa

^{**} Calculated using World Bank population figures and Facebook Ad Manager data. World Bank, 2019.

https://data.worldbank.org/indicator/SP.POP.1564.FE.IN?view=map

^{21.} https://datareportal.com/reports/digital-2021-south-africa?rq=South%20Africa

FIGURE 3: SOCIAL MEDIA USE IN SOUTH AFRICA BY AGE AND GENDER



Source: Kepios, 2021. https://www.statista.com/statistics/1100988/age-distribution-of-social-media-users-south-africa/

The Implementation Science department at the Wits Reproductive Health and HIV Institute (Wits RHI) recently conducted an assessment of their online/digital approaches to raising awareness, engagement, and increasing the uptake and use of PrEP and other sexual and reproductive health (SRH) services among AGYW and their partners in four regions of South Africa (unpublished). Their portfolio of online/digital platforms included a mobile app, chatbot, website, and social media (Facebook Twitter, Instagram, and WhatsApp Business). Lessons learned point to the need to not only involve the target audience in the planning but also pilot innovations prior to implementation, even when target population members indicate that a specific activity would be of use. Of the approaches evaluated, Wits RHI found that their chatbot, website, Facebook ads, WhatsApp groups and WhatsApp Business recorded higher engagement with target audiences. The mobile app was developed to support and reward PrEP clients on their PrEP journey, encourage PrEP use, and build their SRH knowledge. In order to increase access to the app and encourage use of the mobile app, clients received mobile data upon installation and for answering surveys. Engagement on the app was very low as the majority of clients uninstalled it mainly due to limited storage capacity and/or older phone models which meant that clients often deleted the app to save space or were not able to download it.

Recommendation

Based on the information above, digital interventions have a high likelihood of succeeding across South Africa, but pilots should be considered to assure the success of more resource intense approaches like online apps. This is particularly true in an environment where there are already a large amount of tools and apps the population is using, and where integration, rather than new builds, may make more sense.

TABLE 14: mHEALTH INFORMATION, SERVICE, AND DISTRIBUTION SITES AND APPS IN SOUTH AFRICA

Site name	Description
Demand creation: sites, a	apps, and influencers that provide information to target audience
B-Wise	Website with information on reproductive health and services available. Chatbot(Sister Uthani) provided to answer questions and guide users on the site. Includes quiz to ID right form of contraception and quiz to see if PrEP is right for the user. Has active Facebook page with over 24,000 followers. (https://www.facebook.com/BWiseHealth/?ref=page_internal)
<u>Turn.io</u>	In partnership with Girl Effect, turn.io developed a "Big Sis" chatbot who offers private and trusted advice about sex and relationships for girls aged 13–17. (https://www.turn.io/news/girl-effect)
My Charisma	Organizational website focusing on relationships and PrEP use. Visitors can take a quiz to determine PrEP need, get tailored information on PrEP based on results, and have access to a directory of providers for social services, health care, legal, etc.
Soul City Institute for Social Justice	Local organization focusing on social justice. Activities include RISE clubs for young women aged 15–35 in South Africa that empower young women to demand and have access to HIV prevention and reproductive health services. Other activities include blogs, short TV series, and talk shows. Facebook page has close to 20,000 followers and is active. (https://www.facebook.com/SoulCitySA/)
Department of Health	Official twitter account of the National Department of Health South Africa. Has close to 350,000 followers. Posts information on relevant health issues.
Choma	Interactive online magazine for young women providing information on issues including health, beauty, and fashion. Includes chat (Ask Choma), Facebook, and WhatsApp messaging to answer questions. Includes quizzes for users, including one on whether or not to consider PrEP. Active Facebook page with over 150,000 followers. (https://www.facebook.com/ChomaMagazine)
MomConnect	National Department of Health South Africa initiative aiming to support maternal health through the use of cell phone-based technologies integrated into maternal and child health services. The services are free to the user, and messages are available in 11 official languages. Three main aims: electronically register pregnancies as early as possible, provide momsto-be with targeted messages, and allow for women to give electronic feedback on services they have received. Has over 2 million registered users. Developed by praekelt.org. (https://www.praekelt.org/momconnect)
She Conquers	Three-year national campaign targeting young women. Provides information on gender based violence (GBV), education, HIV, and pregnancy. Includes links to BWise health. Includes quizzes to help guide users to services they need. Has Facebook page with over 1,000 followers, semi active. (https://www.facebook.com/SheConquersSA/)
Avert South Africa	Website providing information to the general population about HIV in South Africa.
My PrEP South Africa	Website supported by the Department of Health and She Conquers. Provides overall information on PrEP, including job aids for providers and training materials, quizzes to determine if PrEP is right for the user, and directory of sites to get PrEP based on your location. Has an active Facebook page with over 18,000 users (https://www.facebook.com/myPrEPSouthAfrica) and a Twitter account with just over 700 followers (https://twitter.com/myPrEP_SA).
Re-Action South Africa	Includes LOLA app. LOLA gives girls and young women a platform to access information about a wide range of pertinent topics, complete survey questions, and access linkages to relevant services within their communities.
loveLife	Local organization with over 20 years in HIV prevention focusing on youth. Posts information on prevention. Active Facebook page with over 80,000 followers. (https://www.facebook.com/loveLifeNGO/)
ChattyCuz	Digital platform for young women to learn about healthy relationships. Chat bot on WhatsApp, now in rolling-out stage.
Moja Love	TV channel dedicated to portraying life in South Africa. Has Facebook page promoting/listing upcoming shows with over 495,000 followers. (https://www.facebook.com/MojaLoveTV/)

Site name	Description			
Moya App	A data-free app that allows users to chat, read news, get sports scores, check weather, and communicate with government services free of charge. Available from Google Play store and Hauwei.			
Health-e News	Website with general audience focus providing overall news about health issues. Has active Facebook page with 7,500 members. (https://www.facebook.com/HealtheNewsSA/)			
Service provision: sites and and other telemedicine ser	apps that provide health services to clients. This includes online counselling, booking, vices.			
Marie Stopes	Website with online service booking to their clinic sites.			
ORA	Online service booking and case management app. (coming soon)			
Hello Doctor	App that connects clients to health care providers. App allows users to chat or send a message with questions to providers. It also sends users daily health tips.			
Product/Commodity delive	ry: sites and apps that delivery products to clients' homes or other tertiary locations			
Pelebox	Digital platform allowing clients to collect medications for chronic diseases at lockers throughout their community.			
Beauty on TApp Facebook page	Mobile app that helps clients find beauty service providers in their area. Active Facebook page with 4,500 followers. Online store for ordering and delivery as well (https://shopbeautyontapp.co.za/)			
lyeza Express	Bicycle delivery service that delivers pharmaceuticals to over 1,000 people in Khayelitsha and Cape Town. Provides employment to youth with basic skills.			
Right ePharmacy ATM/PDU dispensaries and smart lockers	Variety of technologies to change drug dispensing/stock management—contactless pickup, master lists/crosswalks for stock lists, tele-pharmacy, automated packing, and includes remote locker pick-ups.			

Uganda (Nascent potential)

Just over a quarter of Uganda's population live in an urban setting and mobile connections are at 60% indicating not everyone has access to mobile telephones. Social media grew by over 35% in the last year, representing about 900,000 new social media users. However, only about 12% of Ugandan females aged 15–35 have Facebook or Instagram accounts (see table below). At the same time, Uganda has a larger than expected number of past and current mHealth interventions (54) potentially indicating in-country capacity for their implementation.

TABLE 15: UGANDA KEY RESULTS FOR 2021

National digital penetration (and % growth in the last year) *		AGYW Population **		Other data for women *		
Mobile	Internet	Social media	Total AGYW	% AGYW with Facebook profiles	% Women conducting online transactions	Literacy rate
60% (+4%)	26% (+14%)	7% (+36%)	8,136,600	12%	6%	71%

^{*} We Are Digital, 2021. https://datareportal.com/reports/digital-2021-uganda?rq=Uganda

https://data.worldbank.org/indicator/SP.POP.1564.FE.IN?view=map

Recommendation

In Uganda, pilot projects in urban settings to inform roll out would be beneficial, particularly given the low percentage of women using social media and the overall mobile connectivity in the country.

TABLE 16: mHEALTH INFORMATION, SERVICE, AND DISTRIBUTION SITES AND APPS IN UGANDA

Site name	Description		
Demand creation: sites, apps, and influencers that provide information to target audience			
MTV Shuga	Four different sites and also active in Botswana, Nigeria, South Africa, Kenya, and Cote d'Ivoire. Includes links to mental health, violence, reproductive health, and COVID-19 resources.		
Avert Young Voices Africa	Site with videos educating users about sex and relationships.		
Sauti plus	Website with blog, discussion, radio, and videos covering a wide range of topics including sexual and reproductive health. Aimed at young people in Uganda.		
NTV Uganda	#NTVNews news site that also promotes reproductive health services and information.		
Service provision: sites ar booking, and other telem	nd apps that provide health services to clients. This includes online counselling, edicine services.		
Centres4Her	Mobile app available in the Apple and Google Play stores. Provides post-violence support (list of health centers, police, counseling, hospitals to women in Uganda). Developed by UNWOMEN. More than 100 downloads.		
ORA	Online service booking and case management app. (coming soon)		
The Medical Concierge Group	Private company offering teleconsults, at-home laboratory tests with electronic delivery of results, online ordering and delivery of medicines.		
WhatsApp Doctor	WhatsApp access to medical advice free of charge and mostly used by younger Ugandans.		

^{**} Calculated using World Bank population figures and Facebook Ad Manager data. World Bank, 2019.

Site name	Description		
Product/Commodity delivery: sites and apps that delivery products to clients' homes or other tertiary locations			
Rocket health	Online medical services including pharmacy with delivery.		
Glovo	Food, grocery, and pharmacy delivery in Kampala and Entebbe.		
Marie Stopes Hotline	Landing page with links for clients to send WhatsApp or Facebook messages to counselors and providers as well as link to book online services. Site also includes a chatbot to guide visitors to what they need.		
Communication for Development Foundation Uganda Hotline	Site with information for users to contact a hotline for information, referrals, and counselling relating to HIV, malaria, GBV, adolescent health, maternal and child health, alcohol abuse, and COVID-19.		

Zambia (Moderate potential)

Zambia has a high urbanization rate compared to other focus countries, with approximately 45% of its population living in urban settings. Mobile connections cover almost 90% of the population, but other priority countries commonly have over 100%. So while it is likely target population members have access, this should be confirmed prior to any implementation. Social media grew by over 13% in the last year, representing about 300,000 new social media users. Thirty percent of Ugandan females aged 15-35 have Facebook or Instagram accounts (see table below) and the country has had experience with past and present mHealth projects (18).

TABLE 17: ZAMBIA KEY RESULTS FOR 2021

National digital penetration (and % growth in the last year) *		AGYW Population **		Other data for women *		
Mobile	Internet	Social media	Total AGYW	% AGYW with Facebook profiles	% Women conducting online transactions	Literacy rate
60% (+4%)	26% (+24%)	7% (+13%)	3,279,889	31%	6%	83%
* We Are Digital, 2021. https://datareportal.com/reports/digital-2021-zambia?rq=Zambia ** Calculated using World Bank population figures and Facebook Ad Manager data. World Bank, 2019. https://data.worldbank.org/indicator/SP.POP.1564.FE.IN?view=map						

Recommendation

With just over one third of the target population having Facebook accounts and the country's high urbanization rate, digital interventions in urban centers should be considered and would likely be the most successful.

TABLE 18: mHEALTH INFORMATION, SERVICE, AND DISTRIBUTION SITES AND APPS IN ZAMBIA

Site name	Description			
Demand creation: sites, app	Demand creation: sites, apps, and influencers that provide information to target audience			
Dr. Mujajati Aaron Facebook page	Facebook page of public figure giving advice on health and beauty. Over 349,000 followers.			
Teal Sisters Foundation Facebook page	132,000 followers, private Facebook page for group focused on cervical cancer. Approximately 16 posts/month.			
Health Matters Clinic Facebook page	Active Facebook page with over 8,000 followers that posts on general health and wellbeing as well as acknowledging local health care workers.			
MOH Zambia Facebook page	Official Facebook page of the Ministry of Health (MOH) with over 797,000 followers.			
Yummy Mummies Facebook Noticeboard	Facebook group with over 90,000 members. Eight years old and highly active with over 300 posts in the last day. Group for mothers where they can get support, advice, tips, ideas, fashion tips, and tutorials. Focus is on Zambian mothers but other nationalities are also welcome. Also have a Facebook page with close to 24,500 followers. (https://www.facebook.com/YummyMummiesZambia?ref=hl)			
Zambia U-Report	Zambia U-Report is a tool for youth in Zambia to report on HIV, AIDS, and STI issues. Facebook page has close to 50,000 followers and is active, sharing information on COVID-19, health, GBV, etc. (https://zm.ureport.in/)			

Site name	Description
Center for Adolescent Health and Research Zambia	Facebook page focusing on health promotion and behavioral change among adolescents in Zambia. Has over 2, 800 followers.
Youth Action Movement (YAM Zambia)	YAM seeks to enhance utilization and availability of quality sexual and reproductive health Information and services for marginalized youth. Their Facebook page has over 3,000 followers.
Zambia Ending AIDS	Ministry of Health's Facebook page providing information and messaging around HIV prevention and treatment. Page has over 73,000 followers.
Marie Stopes Zambia	Facebook page of Marie Stoppes Zambia offering family planning and sexual and reproductive health information. Page has over 12,000 followers.
Mwebantu	Mwebantu is a Zambian media publisher sharing news as it breaks, popular videos, and news on politics, entertainment, sports, lifestyle, celebrities & more. Facebook page has 1,571,176 followers.
RISE UP HOUSE	Facebook age of Rise Up, which provides adolescent friendly services. Target young women. Page has over 1,400 followers.
Global Platform Zambia	Facebook page to Global Platform Zambia, a youth hub for empowerment and activism open for young people who aspire to make possible changes in their society. Has over 16,000 followers.
Pharmaceutical Society of Zambia	Facebook page of the Pharmaceutical Society of Zambia. Post videos and advise on pharmaceuticals, and serves as a platform to enable pharmacists and pharmacy technologists to use their expertise in the care of patients and act as a government pharmaceutical policy advisers. Page has over 2,000 followers.
Service provision: sites and a and other telemedicine serv	apps that provide health services to clients. This includes online counselling, booking, ices.
Hello Doctor Zambia	Membership required. Offers 24/7 clinical support (consultations through phone calls and chat), uses WhatsApp, sends personalized medical tips, informational videos, etc.
QuickRes	Online service booking and case management app.
Product/Commodity delivery	y: sites and apps that delivery products to clients' homes or other tertiary locations
HnG Online Pharmacy	Linked to Health & Glow Pharmacy Limited. Allows for the purchase and delivery of pharmaceuticals across the country.
AfriDelivery	Online food ordering and delivery app. Works in Lusaka and the Copperbelt. App is available in the Google Play and Apple stores.
Zambia Beauty	US-based shop selling beauty products and shipping them to Zambia. Has 26,600 followers.

Zimbabwe (Moderate potential)

About 30% of Zimbabwe's population live in an urban setting and mobile connections are at 99% indicating most target population members may have access to this technology. Social media grew by 33% in the last year, representing about 320,000 new social media users. However, only about 11% of Zimbabwean females aged 15-35 have Facebook or Instagram accounts (see table below) and past and current mHealth interventions number at about five.

TABLE 19: ZIMBABWE KEY RESULTS FOR 2021

National digital penetration (and % growth in the last year) *		AGYW Population **		Other data for women *		
Mobile	Internet	Social media	Total AGYW	% AGYW with Facebook profiles	% Women conducting online transactions	Literacy rate
99% (+12%)	33% (+4%)	9% (+33%)	4,546,432	11%	6%	88%

^{*} We Are Digital, 2021. https://datareportal.com/reports/digital-2021-zimbabwe?rq=Zimbabwe

https://data.worldbank.org/indicator/SP.POP.1564.FE.IN?view=map

Recommendation

While mobile ownership is high in Zimbabwe, Internet/social media use is not high, and is very costly. Therefore moderate potential is mainly related to mHealth interventions leveraging voice calling and SMS. Pilot projects in urban settings to inform roll out would be beneficial, particularly given the low percentage of women using social media and the country's limited experience with mHealth interventions.

TABLE 20: mHEALTH INFORMATION, SERVICE, AND DISTRIBUTION SITES AND APPS IN ZIMBABWE

Site name	Description			
Demand creation: sites, apps, and influencers that provide information to target audience				
Zimbabwe Sugar Moms and Sugar Dady Linkups	Facebook page with just over 4,000 followers. Anyone can post but can inbox admin for "Linkups."			
Zim Mums Magazine	Facebook page for mother-focused lifestyle magazine with 2,500 followers. Semi active (last post May 2021). Have a related blog post site. (https://zimmums.blogspot.com/?fbclid=IwAR2Rqz7qKpd15tMG2CWZeJSwZTN046cgnwwT8GKh6kts-fkiXX_2-FelibE)			
HIVHealth Zimbabwe	Facebook group for sharing information and generating discussion on HIV, AIDS, and related health issues in Zimbabwe. Focus on general population. Has 3,300 members and had 16 posts in the last month. Created nine years ago.			
Zimbabwe Youth Council	Institution dedicated to serving the young people of Zimbabwe through creating platforms for youth empowerment and participation. Facebook page has close to 19,000 followers and is active.			
<u>U-Report Zimbabwe</u>	U-Report Zimbabwe is a tool designed to engage young people through SMS on various developmental issues in their communities. Facebook page has around 8,700 followers. (https://zimbabwe.ureport.in/?fbclid= IWAR3ExMF25eEx2rzkt5xQkvZLE5vgzxULyQef9GO3vQdmaUTk4YTyp4Zggxw)			

^{**} Calculated using World Bank population figures and Facebook Ad Manager data. World Bank, 2019.

Site name	Description
SAYWHAT	SAYWHAT is a non-profit organization working with students and tertiary institutions to promote SRHR. They engage students through their peer educators who utilize WhatsApp platforms to sensitize and educate their target audience on SRHR. We can ride on these platforms for demand generation as these platforms are large enough to draw in a large number of AGYW in tertiary institutions. The organization also has a highly active Facebook page with over 50,000 followers.
<u>UZ Celebs</u>	Instagram page for news and gossip regarding the University of Zimbabwe. Page is active with 105,000 followers.
zimsinglesmatchmaking	An Instagram-based matchmaking service for Zimbabwe singles with 5,000 followers.
Tune Me	Website for information exchange relating to love, sex, and relationships. Targets youth in Zimbabwe and provides information and allows users to add "tips" for other users.
Amaze	Website on sex education for youth. Provides special sections on puberty, sexual orientation and gender identity, STIs &HIV, pregnancy, and healthy relationships.
Service provision: sites and booking, and other teleme	apps that provide health services to clients. This includes online counselling, dicine services.
Dial a Doc	24/7 health advice over the phone. Charged service with 100,000 clients. Has a non-active Facebook page with 76 followers. (https://www.facebook.com/Dial-a-Doc-106947544408726)
Interactive SMS to provide VMMC follow-up	Randomized controlled trial in Chitungwiza district. Implemented by Medic Mobile, I-TECH, the University of Washington, and the ZAZIC consortium. Aims to test if SMS can be used to replace in-person follow up after voluntary male circumcision.
ORA	Online service booking and case management app. (coming soon)
Friendship bench Online talk therapy – Friendship bench	Online counseling services.
Interactive SMS to provide VMMC follow-up	Randomized controlled trial in Chitungwiza district. Implemented by Medic Mobile, I-TECH, the University of Washington, and the ZAZIC consortium. Aims to test if SMS can be used to replace in-person follow up after voluntary male circumcision.
Product/Commodity delive	ry: sites and apps that delivery products to clients' homes or other tertiary location
The Medicine Chest	Online pharmacy that allows clients to purchase goods online.

Non-focus country results

TABLE 14: SUMMARY OF COUNTRY RESULTS FOR NON-FOCUS COUNTRIES

Country	Country population	Proportion reporting daily mobile telephone use	Proportion reporting daily mobile telephone use by both men and women, by age (%)**				
	(% urban)*	(% male / female)**	18-25	26-35	36-45	46-55	
Botswana	2.4 M (71%)	87% / 88%	93%	91%	92%	84%	
Cote d'Ivoire*	26 M (51%)	93% / 80%	88%	88%	87%	9%	
Eswatini	1.2 M (24%)	87% / 81%	84%	91%	86%	82%	
Ghana	31.4 M (58%)	88% / 80%	84%	88%	83%	82%	
Kenya	54.4 M (56%)	88% / 83%	86%	87%	86%	91%	
Lesotho	2.2 M (29%)	77% / 74%	85%	82%	83%	68%	
Malawi	19.4 M (18%)	54% / 37%	42%	52%	51%	47%	
Mozambique	31.7 M (37%)	73% / 61%	68%	67%	70%	64%	
Namibia	2.6 M (53%)	91% / 89%	92%	91%	88%	92%	
Nigeria	208.8 M (52%)	90% / 74%	82%	85%	81%	78%	
Rwanda	13.1 M (18%)	-	-	-	-	-	
South Africa	59.7 M (68%)	88% / 86%	89%	90%	90%	82%	
Tanzania	60.6 M (36%)	80% / 67%	72%	72%	83%	73%	
Uganda	46.3 M (25%)	77% / 57%	67%	72%	67%	66%	
Zambia	18.7 M (45%)	67% / 59%	64%	71%	62%	61%	
Zimbabwe	15 M (32%)	74% / 67%	74%	77%	76%	77%	

^{*}Source: Digital 2021: Global Overview Report. We Are Social, Jan 2021.
** Source: Afrobarometer, 2018

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ANNEX

Survey on digital channels used among women

Welcome! This survey is for anyone who works on projects to improve the lives and well-being of women, especially adolescent girls, young women, those who are pregnant or breastfeeding, and female sex workers. We are trying to identify and understand the digital channels women in your country use to find information, products, or services to meet their health and non-health needs.

A digital channel can be a website or webpage, social media app, phone app, chatbot, or even a phone or SMS hotline. Digital channels can be accessed using a computer, mobile phone, or tablet.

The results of this survey will be used to inform how we use digital channels to promote and link women to new HIV prevention products.

Your responses will be anonymous unless you choose to give us your contact information.

The survey may take up to 10 minutes to complete.

- 1. Please begin by selecting the country in which you work (drop-down country list).
- 2. Which project do you work on? Write the name of the project below (open-ended).
- Does your project currently support, or is planning to support, a digital channel in this country? (Yes/No; if No, skip to question 8)
- Please list the existing or planned digital channels supported by your project. Please include URLs (open-ended).
- Can we follow-up with you directly to discuss your experiences with this/these digital channel(s)?
 If yes, please enter your email address. (Yes/No)
- Have you conducted any evaluations to measure the impact of this/these digital channel(s) on user behavior? (Yes/No; if No, skip to question 8)
- 7. Can we follow-up with you directly to discuss the results or evaluation plans? If yes, please enter your email address.

Now we'd like to know about digital channels you may not be actively working with, but that are used by women in your country.

- 8. Please list other digital channels (e.g., websites, social media pages, apps, etc.) that women in your country use to learn about, or perhaps access, health products and services. Please include any known URLs (open-ended).
- Please list any other non-health digital channels that are popular among women in your country.
 For example, websites that provide beauty advice, Facebook support groups for new mothers, apps that provide educational content, etc. Please include any known URLs (open-ended).
- 10. We may be interested in discussing the information you have provided. Please include your contact details below if you are willing to be contacted.

Thank you for your feedback! We really appreciate your time. Your responses have been saved.