

‘Informed and empowered’: a mixed-methods study of crowdsourcing contests to promote uptake of HIV self-testing kits among African Americans

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Abstract

Objective: HIV self-testing (HIVST) kits are a viable alternative to testing in clinical settings, but research on the effective ways of promoting uptake of HIVST kits has been lacking. The present study examines crowdsourcing contests as community engagement to promote uptake of HIVST kits among African Americans in the southern region of the US.

Methods: This mixed-methods study design evaluated two contests through qualitative assessment of contest entries. The first contest elicited ideas on how to promote HIVST kits. The second contest sought branding ideas for a pop-up HIVST booth. Qualitative data were digitally transcribed and analysed using MAXQDA software and axial coding.

Results: The study participants ($n = 296$) were mostly African American ($n = 258$, 87%) and between 18 and 25 years of age ($n = 84$, 28%). Contestants suggested making HIVST kits available in community sites and highlighting kits as potential sources of knowledge, relief and empowerment.

Conclusion: Crowdsourcing contests are a beneficial community engagement tool to identify new ways to promote uptake of HIVST kits.

Keywords: African Americans, HIV, HIV testing, crowdsourcing, community engagement

Introduction

HIV self-testing (HIVST) kits have been shown to be a viable alternative to testing in clinical settings, but little is known about the most effective ways of raising awareness or promoting the use of HIVST kits. HIVST refers to a person being tested and interpreting his or her own test result [1]. There is low demand for HIVST in many communities, which is likely related to low community knowledge and limited individual and community-level engagement [1]. To maximise HIVST, innovative strategies are needed to promote its implementation and dissemination among populations that are at risk of HIV [1]. Efforts to increase HIVST awareness and distribution have begun in some US states, with departments of public health in New York [2] and Virginia [3] using campaign advertisements on online platforms and peers to distribute HIVST kits. Other strategies that have been evaluated include using voucher programmes and, for example, vending machines in Los Angeles to make HIVST kits available to African American men who have sex with men (MSM) [4,5]. However, little has been done to promote HIVST kits among African Americans in urban and rural areas of the American South. African Americans living in these urban and rural areas are at highest risk of acquiring HIV or AIDS and may benefit from increased knowledge about and access to self-testing kits as a more convenient option for HIV testing as more than one-third of African Americans have never been tested [6]. Stigma associated with testing remains a barrier, especially in rural areas of the

American South, where residents are often diagnosed later than those in urban areas [7].

Crowdsourcing is one approach to increase demand for and community engagement in HIVST kits among African Americans. It is a process whereby an organisation solicits ‘solutions to tasks via open calls to large-scale communities’ [8]. A distinguishing feature of crowdsourcing is harnessing the power of the masses, rather than a small group of experts, to advance innovative solutions [8–10]. Crowdsourcing contests are a subset of crowdsourcing whereby a panel of judges evaluates submissions and finalist entries are publicly celebrated. Crowdsourcing contests have been shown to produce solutions better or at least equivalent to that of experts [11] and have designed solutions for biomedicine, a teen sexual health intervention [12], HIV testing programmes [13], HIV testing campaign videos [14] and other health research studies [15]. Crowdsourcing contests combined with community engagement efforts [16] have been successful at designing a global sexual health intervention for teens [17], HIV testing programmes in China [14] and HIV cure clinical research engagement [18,19].

There is a gap in the literature around using crowdsourcing contests to promote HIVST kits among US-based populations. Here we have used the community action model as a framework for designing, implementing and evaluating crowdsourcing contests to promote HIVST kits. The community action model focuses on designing a community engagement project that is asset based (i.e. it builds on the strengths of a community to create change from within) [20,21]. It builds community capacity by collaborating with communities to assess the health conditions in their community, and develop, implement and evaluate plans to address those problems. The purpose of this study is to conduct a mixed-methods evaluation of the extent of community engagement in

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crowdsourcing contests to develop an HIVST promotion campaign in the US.

Methods

This study includes a qualitative evaluation of contest entries. We hosted two contests: the first one focused on getting general ideas from the public on ways to encourage uptake of self-testing. Prize incentives for the first contest were US\$75, US\$50 and US\$25 gift cards. The contest used the prompt ‘How do we make it easier for people to use self-testing kits?’ Contest submission was facilitated through the 2BeatHIV project site and on hard-copy handbills for in-person submissions. Contest winners were chosen based on votes from a panel of expert judges (1–10 scores) for each category: ‘New and different’, ‘Potential for reducing HIV testing stigma’ and ‘Easy to do’. After selecting finalists and the winning submission, we developed the prompts for the second contest to focus on developing the branding for the winning idea from the first contest. The second contest focused on designing branding for an HIVST campaign. Prize incentives for the second contest were US\$50, US\$75 and US\$100 gift cards. The prompts for the second included a description of the finalists from the first one and a survey of prompts for specific branding elements, such as the name of the campaign, slogan (a short and striking or memorable phrase used in advertising), hashtag (a word or phrase preceded by a hash [#] or pound sign and used to identify messages on a specific topic) and call to action (instruction to the audience designed to provoke an immediate response). The finalists in the second contest were chosen based on scoring from expert judges. Criteria for selecting winners included ‘relevant to target population (African Americans aged 18–35 years)’, ‘potential for message to leverage lots of media vehicles, reach target population at multiple angles with plenty of repetition and frequency’, ‘message solves a problem or conveys a benefit to target population’, ‘simple to understand’ and ‘easy to remember’. Finalists and other contest submissions were celebrated via social media. This study was approved by the Institutional Review Board at The University of North Carolina at Chapel Hill.

The contests align with several steps of the community action model, which ask community members to (1) name the issue and choose an area of focus; (2) define, design and do a community diagnosis of the problem; (3) analyse results of the community diagnosis; and (4) section an action or activity for implementation [20]. After collecting responses to the first crowdsourcing contest, the research staff analysed the results of the contest entries through the framework of assessing themes that related to a ‘community diagnosis’ of the problem of low uptake of HIVST kits. Step 4 of the community action model was achieved through the process of having a panel of judges score contest entries and select finalists, resulting in a final activity to promote uptake of HIVST kits.

Contest recruitment

We primarily used online and in-person engagement to recruit African Americans between the ages of 15 and 35 years in the Triangle region (Durham, Chapel Hill, Raleigh) of North Carolina to participate in the crowdsourcing contests, although participation was open to all people aged ≥ 15 years. The 2BeatHIV team worked with community partners to facilitate contest submissions through in-person community engagement events, such as local parades, football games at historically black colleges and universities, and online (Instagram, Facebook, Twitter, 2BeatHIV contest site). The aim of the in-person and online engagement activities was to provide open and safe spaces for community members to

express their thoughts, creative ideas and concerns about HIVST kits and home testing; to recruit participants to the crowdsourcing contest; to clarify the crowdsourcing contest; and to provide opportunities for participants without regular internet access to submit entries to the contest via hard-copy handbills for in-person submissions.

Measures

Participants were required to provide demographic information, including age range, racial or ethnic identity, gender identity, date and zip code. Measures for online engagement were extracted from Facebook and included ‘page follows’ (unique users who subscribed to page update alerts), page visits (unique users who visited a page), and demographic (age range and sex) and geographic (city and country) information about unique users who visited the social media page. Reach was measured by the number of unique users who passively viewed any posted content from the contest’s Facebook page.

Data analysis

Summary statistics was used to describe contestant demographics and online engagement metrics. We used axial coding to analyse contest submissions. A thematic codebook developed by project staff members was used to analyse qualitative data from entries for the crowdsourcing contests. Two staff members developed the codebook through consensus by independently coding the contest entries and convening to reconcile discrepancies in coding decisions [22]. Deductive codes identified thematic patterns in the transcripts of contest submissions. Messages from contests’ submissions were categorised based on emergent themes focused on participant suggestions for improving self-testing (social support, confidentiality), similar to analysis methodologies used in other crowdsourcing contest studies [23]. The entries to the first contest were categorised based on their relation to improvements in promoting self-testing kits among African American young adults in North Carolina. Some inductive codes included promoting via social media and in-person conversation, providing post-test counselling, information and social support before and after testing, making the tests affordable with timely results, and ensuring confidentiality. The entries to the second contest were categorised by how their messages promoted branding of self-testing kits. We analysed each category (e.g. tagline, name, slogan, hashtag and call to action) of branding separately and developed codebooks based on content in each category. Examples of inductive codes included knowledge, empowerment, self-care and relief.

Results

Participant demographics

The first contest lasted 12 weeks, from 14 October 2017 to 6 January 2018. A total of 249 individuals participated in the contest. Most of them ($n = 217$, 87%) were black and the rest ($n = 32$, 13%) were white, Asian, Hispanic or of mixed race. Of the 249 participants, 81 were men (32%) and 158 were women (66%). The remaining were missing responses ($n = 10$, 4%). The ages of the contestants ranged 18–75 years, and the majority ranged 18–41 years of age ($n = 131$, 55%) (see Table 1). Contestants submitted entries via in-person events ($n = 239$) and the contest website via an online form ($n = 10$).

The second contest lasted 9 weeks, from 29 January 2018 to 30 March 2018. A total of 47 people, of whom the majority ($n = 43$, 91%) were black, participated in the second phase of the crowdsourcing contest. The remaining ($n = 4$) contestants

Table 1. Characteristics of individuals who submitted entries to the contests, $N = 296$, 2017, North Carolina, USA

Characteristics	First contest <i>n</i>	Second contest <i>n</i>
Sex		
Men	81	3
Women	158	44
Missing	10	0
Total	249	47
Age (years)		
Under 18	14	0
18–23	64	20
24–29	24	5
30–35	25	12
36–41	18	5
42–47	24	4
48–53	26	0
54+	45	1
Missing	9	0
Total	249	47
Ethnicity		
Black/African American	217	43
White	16	2
Hispanic/Latinx/Spanish	10	2
Asian	4	0
Mixed (non-specified)	2	0
Total	249	47
Residence in USA		
Morrisville, NC	0	16
Raleigh, NC	35	2
Chapel Hill, NC	7	9
Durham, NC	119	6
Other, NC	61	10
Other states	22	4
Missing	5	0
Total	249	47

NC = North Carolina.

were white or Hispanic men and women. Contestants included ($n = 3$) men and ($n = 44$) women. The ages of the contestants ranged 18–54 years, with the majority of contestants aged 18–29 years ($n = 25$, 53%). Contestants submitted entries via in-person events ($n = 38$) and the contest website via an online form ($n = 9$).

Online engagement

To promote the first contest, we used Facebook online engagement for 12 weeks, which resulted in an increase in page followers by 27 from 440 to 467. Engagement also included 738 page visits, 912 video views and a reach of 9244 unique users who saw any contest-related material online. Most of the Facebook page followers who engaged contest-related posts, promotional flyers and videos were women ($n = 310$, 66%), aged 25–44 years ($n = 297$, 63%) and resided in North Carolina ($n = 279$, 59%).

Over the course of 14 weeks, we used Facebook to promote participation in the second contest. Facebook engagement among our 472 followers and other unique users included 238 page visits, 76 video views and a reach of 3226 users who saw any contest-related material online. Most of these Facebook page followers who engaged contest-related posts, promotional flyers and videos on the project's Facebook page were women ($n = 310$, 66%), aged 25–44 years ($n = 297$, 63%) and resided in North Carolina ($n = 279$, 59%).

Qualitative assessment of crowdsourcing contest entries

Entries to the first contest highlighted three ways of promoting the uptake of HIVST kits among African Americans: (1) educate people about the availability of the kits; (2) increase access to low-cost kits; and (3) provide educational and social support to people before, during and after the use of self-testing kits.

Awareness of availability of HIV self-testing kits

The majority of entries ($n = 48$) to the first contest suggested ways of promoting HIVST kits to increase community uptake. Some suggested educating the public about the availability of self-testing kits via media outlets: *'having more c[ommercials] and TV show[s that] be having people tell there (sic) story on TV and meet [make] fly[ers] in public like [at] bar[s]/bus stop[s].'* A black female contestant (aged 18 years) suggested that *'we need more advertisements and public health seminars on this new testing design. I have never heard of this product, but if I had seen a commercial on it, I would be more likely to understand the product and actually know about it.'* Additionally, a black female contestant (aged 23 years) suggested using creative outlets like skits, plays and online *'web series/skits that would help guide people's behaviors [in using HIVST kits]'* and create messages and images that [show] a person living with HIV having a *'normal'* [life] and their status being shown in a nonchalant way – *'taking meds or helping a friend who suspects they may be positive and they get a home test together.'* Lastly, word of mouth was suggested as a powerful tool for raising awareness about HIVST kits: *'get more people to do the home test then get them to talk about their experience with test (how easy it was, etc).'*

In addition to promoting HIVST kits through various outlets, several contestant entries ($n = 25$) suggested providing access to HIVST kits in various locations throughout the community. For example, some of the locations that participants suggested included, *'homes', 'schools', 'church ministries', 'CVS/Walgreens', 'community centers', 'vending machines', 'online order'* and *'sending kits in the mail'*. The submissions seemed to emphasise convenience and widespread distribution of HIVST kits as a mechanism to increase uptake.

Affordability of HIV self-testing kits

Many contest submissions ($n = 28$) focused on the idea that HIVST kits should be affordable and easy to access. As one black female (aged 18 years) described, *'The price to pay for at home HIV testing is a major hold back for a lot of people. Safe sex should be easier [if kits were] free.'* Confidentiality and convenience of accessing HIVST kits were also important. For example, a white female (aged 18 years) suggested that people would be more likely to use HIVST kits if they had the *'ability to send off tests confidentially and receive results with a protection of privacy, minimal costs and high accuracy [of test results].'* Similarly, a 58-year-old black woman suggested to *'make the kits available for free at drug stores or community centres in discreet packaging.'* While affordability was important, contestants paired suggestions

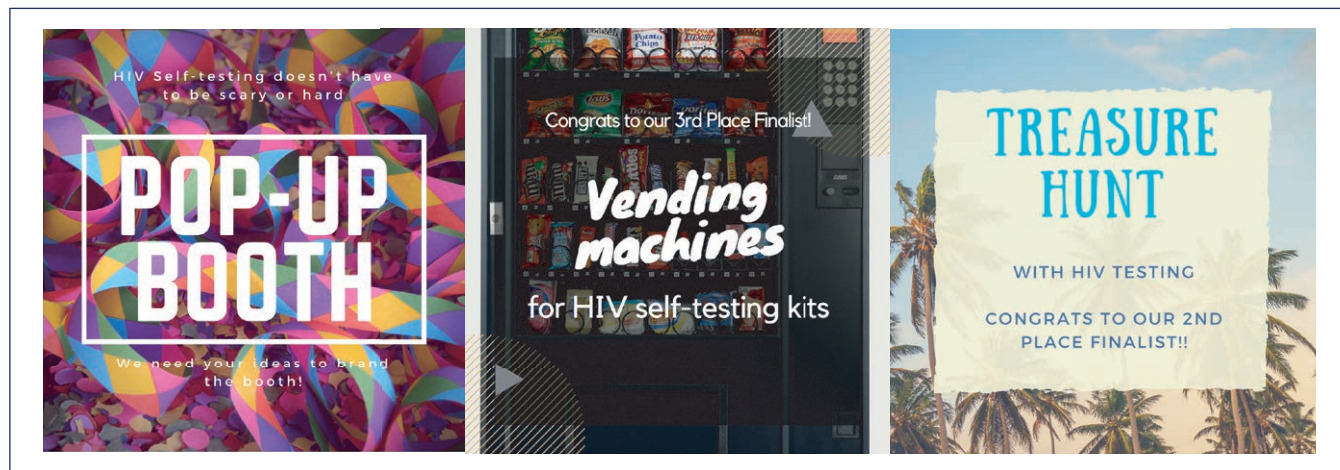


Figure 1. Finalists in the first contest

for promoting uptake of HIVST kits with convenience of accessing the kits and protecting confidentiality.

Resources to provide educational and social support for HIV self-testing kits

Many submissions ($n = 26$) focused on the importance of providing educational and social support resources for people using HIVST kits. One black woman (aged 18 years) suggested that ‘educating people about HIV and how it can be prevented would increase the likelihood of home testing. Home testing should be a positive experience for them.’ Another black female contestant (aged 38 years) explained that providing information about HIV would encourage people to get tested because it would reduce fear about a potential positive result: ‘Disseminate information that will be helpful if a person has a positive result. Also, have more information about HIV and how people live longer than before and can lead a wonderful life.’ Similarly, a white female (aged 18 years) explained that providing information about HIV would also increase risk perception and awareness about the potential ‘absence of symptoms in people who are HIV positive. Most people stated that they felt fine and therefore they don’t need to be tested. This is a fallacy. Some people go years without showing symptoms and are HIV positive.’ Contestant entries underlined the importance of combining the promotion of HIVST kits with easy-to-understand information about HIV and HIV testing before and after using the kit.

In addition to educational material and messages, many submissions ($n = 25$) highlighted the need to provide social support for people using HIVST kits. A white female (aged 22 years) suggested to ‘provide information for resources at the beginning. Create a sense that even if the test is positive, they have a list of places and people that they can reach. Do not leave it to someone who has just received a positive test to go out and look for resources themselves because they may feel ashamed.’ Another black female (aged 22 years) focused on social support from a ‘home support system.’ Similarly, a biracial female (aged 44 years) focused on making ‘home testing more comfortable and confidential. Treat people like their [they’re] humans and [not] like animals.’ These contest submissions highlight the importance of making information about social and educational support resources easily accessible to HIVST kit users.

The first-place finalist in the first contest suggested to create a ‘pop-up booth at each school (i.e. school of medicine, dentistry, public health, local grocery stores)’ to promote proper use of self-testing kits. The second-place finalist suggested to ‘have

them [HIVST kits] accessible in vending machines at pharmacy stores or even clubs.’ The third-place finalist suggested to ‘have a contest where it’s like a treasure hunt. That way you are not the only one. You have your peers participating and acting as a support group’ (see Figure 1 for finalist entries). These finalist submissions were rated highly because of their novelty, ease of implementation and potential for reducing HIV testing-related stigma.

The ideas from the first contest showcase a variety of community-based ideas on ways to increase uptake of HIVST kits. Using the finalists’ ideas from the first contest, we developed a prompt for the second contest that focused on developing branded messaging to promote a pop-up booth that incorporated interactive activities, such as a treasure hunt, and provided opportunities for people to purchase self-testing kits on-site at the pop-up booth like vending machines. The main themes that emerged from the second contest focused on highlighting the potential of HIVST kits to be a source of (1) knowledge, (2) empowerment and (3) relief (see Table 2).

HIVST kits can be a source of knowledge

Many entries ($n = 13$) to the second contest highlighted HIVST kits as a source of security by helping people know their HIV status. One contestant suggested naming the pop-up booth the ‘Happier Knowing HIV Station’ with the tagline ‘Knowing will give you access to better care no matter what.’ Others identified the knowledge gained from using an HIVST kit as motivation to protect oneself from acquiring HIV or AIDS: ‘I’m comfortable knowing I’m safe!’ and ‘You’d want security for your home, why not for your body?’ Additionally, contestants saw the knowledge gained from HIVST kits as a source of self-care: ‘Show yourself love. Try it and be happier knowing!’ and ‘It’s better to be knowledgeable about your health! Easy as 1, 2, 3! Put yourself and your health first!’

Using HIVST kits can be empowering

Many submissions ($n = 17$) highlighted the potential for HIVST kits to empower people to take control over their health. For example, one contestant suggested the following call to action for using HIVST kits: ‘When it comes to HIV, early diagnosis is key. Safe tests are quick, easy, confidential and potentially life-saving. Take charge of your own health and get tested today.’

Others highlighted the importance of using the kits to prioritise their health, with a slogan like ‘Being Safe and Sexy is Boss’

Table 2. Sample quotes from ‘pop up booth’ marketing crowdsourcing contest entries (second contest), $N = 47$ total submissions ($n =$ number of submissions for each theme by contest category)

Theme	Tagline	Name	Slogan	Hashtag	Call to action
Knowledge	‘Love is blind, but tests are clear.’	‘Better 2 know pop-up’	‘Informed and empowered’	#better2know	‘Learn your status where you are comfortable, on your terms, and in your own space. It’s better 2 know!’
	$n = 5$	$n = 13$	$n = 11$	$n = 12$	$n = 11$
Relief	‘Peace of mind, one test at a time.’	‘You’re doing the right thing.’	‘Leave the worry behind with health security!’	#dotherightthingtobeatease	‘Remove doubt and worry with answers and solutions.’
	$n = 8$	$n = 10$	$n = 6$	$n = 8$	$n = 5$
Self-empowerment	‘Your worth is not defined by the results.’	‘Knowledge is power pop-up’	‘Being safe and sexy is boss.’	#powertothepeople	‘You matter, protect your health first.’
	$n = 6$	$n = 9$	$n = 6$	$n = 17$	$n = 8$

**Figure 2.** Finalists in the second contest

and the hashtags ‘#putyoufirst’, ‘#treatyourselftestyourself’ and ‘powertothepeople’.

HIVST kits can provide relief

Many contestants ($n = 10$) also suggested messaging to highlight the potential relief associated with using the kit. Some contestants suggested using the name ‘Personal Peace Pop-Up’ and the tagline ‘Peace of mind, one step at a time.’ Some contestants suggested hashtags to highlight similar themes around using HIVST kits as a source of relief: ‘#healthsecure’, ‘#safesex’ and ‘#peacefulplay’. These messages regarding relief seemed to be based on the idea that a person would test negative for HIV. However, there was one contestant whose call to action seemed to reflect the idea that regardless of the test result, a person using an HIVST kit could ‘remove doubt and worry with answers and solutions.’ This statement suggests that if people test positive using the HIVST kit, they will still experience relief because they knew their status.

The finalists’ entries in the second contest are included in Figure 2. The entries conveyed messages of knowledge, empowerment, self-care and relief, similar to other contestants. These finalists received the highest average scores from the panel of judges for being simple to understand, easy to remember, relevant to target population (African Americans aged 18–35 years) and easily used via multimedia outlets. It is important to note that only one of the finalist submissions incorporated HIV into the messaging and only four contest submissions had the word HIV

incorporated anywhere in their entries. This may reflect an attempt to detach the stigma associated with HIV from the pop-up booth branding to attract potential consumers.

Discussion

We used the community action model as a framework for implementation and evaluation of crowdsourcing contests to develop an HIVST promotion campaign among young African Americans. The majority of recruitment efforts were focused on in-person engagement at local community-based events, which created opportunities for on-site contest participation. Participation in the contests seemed to depend on the level of effort required for a person to participate. For example, the second contest required participants to submit ideas for branding a pop-up booth, which needed more time and thought than the first contest, which only asked participants to submit no more than two sentences on how to promote HIVST kits in their communities. Thus, the number of participants in the second contest was lower than in the first contest. Our findings show crowdsourcing contests are an effective mechanism to elicit community-based ideas for interventions that promote uptake of HIVST kits among African Americans.

Crowdsourcing contests can result in practical suggestions on creating messaging to increase awareness of HIVST kits. Findings from contest submissions show that it is important to increase awareness, availability and affordability of HIVST kits by making the them available in frequently visited community sites; communicating

the potential benefits of the kits as sources of knowledge, relief and empowerment; and providing easy access to social and educational support before, during and after testing. Previous literature has mostly focused on the barriers to using HIVST kits among low-income, high-risk populations, such as cost [1], difficulty in understanding HIVST kit instructions [1] and concerns about the accuracy of test results [1,24]. However, little is known about how to effectively design and disseminate messages to promote the uptake of HIVST kits to reach African Americans and other marginalised populations [1]. Our study fills this gap by eliciting community-based suggestions on how to design and disseminate these messages for African Americans in the south of the US.

Dissemination of messaging to promote uptake of HIVST kits should combine the use of multiple media outlets and non-clinic, community-based settings. Contestants suggested leveraging several multimedia platforms such as social media, TV and online episodes to educate the public about the utility and availability of HIVST kits and reduce stigma around HIV testing. Moreover, they suggested providing the kits for free and promoting them in non-clinic, community-based settings. Similarly, previous studies have shown that promoting HIV testing in community-based settings is more effective at reaching African Americans aged between 18 and 35 years than in clinic-based settings [25–27].

Crowdsourcing contests are a beneficial community engagement tool to implement the multiple steps of the community action model. Community members collectively were able to suggest messaging and branding that promote uptake of HIVST kits. While most studies focus on the perceptions of HIVST kits among African Americans from multiple subgroups, few have examined ways to elicit community-based messaging to promote HIVST kit uptake [25]. Our findings suggest that African Americans are willing to participate in crowdsourcing contests as a mechanism to identify new ways to promote use of HIVST kits in their communities. The use of in-person engagement to promote the contest and facilitate contest entries may be a useful way to encourage participation and to achieve the goals outlined in the community action model.

There are some limitations to this study. We may not have reached demographic groups with limited skill sets and access to resources, especially those most at risk of acquiring HIV or AIDS. Also, we did not collect data on how many participants have ever used an HIVST kit. The strength of the study lies in the possibility of recruiting a diversity of participants from multiple age groups, races or ethnicities, urban and rural areas of the American South, literacy levels, and resource-limited settings. Emergent themes from the contest entries may not be generalisable to other African American communities at risk of HIV acquisition. Participants were recruited via a convenience sample and research staff did not assess whether contestants were from vulnerable subgroups. However, the findings do provide insight to peoples' thoughts about ways to increase uptake of HIVST kits. Future studies should examine how crowdsourcing contests for sexual health might best incorporate participation from people from vulnerable populations. Lastly, because we facilitated contest submissions in-person, it is difficult to assess the extent of engagement with the public around the promotion of the crowdsourcing contest. Future studies could enlist research staff to assess the number of people who have ever used an HIVST kit and collect data on the number of people with whom they have interacted, refused to participate and agreed to participate in the contest at in-person events for a more accurate assessment of in-person engagement.

Conclusions

Crowdsourcing contests may be useful for designing campaigns and interventions that can improve uptake of HIVST kits among African Americans. The findings of the present study suggest that recruitment through in-person community events may be a useful way to reach young black adults for participation in future crowdsourcing contests. The most successful source of recruitment for contestants were at football games at historically black colleges and universities and community parades located in predominantly black communities. Crowdsourcing contests provide opportunities for community members to identify barriers to using HIVST kits and suggest solutions to help facilitate uptake. Additionally, crowdsourcing contests provide a mechanism for the public to further refine those ideas by submitting suggestions to promote HIVST kits with messaging and branding that reflect the preferences of local communities most affected by the HIV and AIDS epidemic. Future research should assess how effective the crowdsourced intervention of a pop-up booth may be at improving uptake of HIVST kits among African Americans. This information could be gathered through focus group discussions with African Americans about the utility of HIVST pop-up booths in various public spaces and through pilot testing of the booths in the locations that are suggested as most amenable to the intervention.

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Conflicts of interests

The authors declare no conflicts of interests.

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