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## **YouTube viral videos and HIV prevention among African-Americans: Implications for HIV prevention**

Jocelyn D. Patterson and Khiya J. Marshall

### **Abstract**

*A viral video is a video which gains widespread distribution through the process of Internet sharing, typically through email, blogs, and other media-sharing websites, such as YouTube. Given the popularity of YouTube with African Americans, a content analysis was conducted to examine the characteristics, content, and YouTube member responses to viral videos featuring African Americans and focusing on HIV/AIDS prevention. The top two most frequently viewed videos elicited in our search generated strong viewer comments that were grouped under three major themes: threats and insults toward the maker of the video, questions about the authenticity of the video maker's claims, and positive comments supporting the statements made in the video. The motivation to share HIV-related videos may be related to the video's elicitation of emotions like anger and frustration or the inspiration of feelings of encouragement or support.*

**Keywords:** African-American, Black, HIV, YouTube

YouTube ([www.youtube.com](http://www.youtube.com)) is a free Internet-based video sharing and storage website launched in February 2005. The website is designed to publicly store short video clips which visitors can view and share with others. The website's users have the ability to connect and communicate with other users by posting responses and written comments. Videos uploaded to YouTube can be accessed across the Internet through the YouTube website, links embedded in other websites, mobile devices (e.g., Smartphones), email, or social networking sites, making it easy for video clips to be shared and quickly circulated around the world. According to YouTube statistics, every minute 48 hours of video are uploaded to the website. With an audience of over 800 million unique visitors per month (YouTube, 2012), YouTube should be considered an important resource for gauging health information available to the public. However, despite the extensive viewing audience and potential reach of YouTube video clips, the public health impact of viral videos has yet to be measured (Freeman & Chapman, 2008).

Among the millions of videos housed on the YouTube site, there are certain videos that "go viral." Viral videos are video clips that are widely disseminated and become popular due to large scale social transmission in the form of email, embedding in webpages, and sharing on social network sites. Viral videos are unique phenomena that offer a special opportunity to communicate a discrete message with thousands, perhaps even millions, of people. These videos have the potential to capture the attention of mainstream culture without large financial investments in video development and distribution. Yet, little is known about what motivates online video consumers to disseminate videos to others. In light of the scalability and low cost of viral videos, it is important to learn more about how to maximize this resource.

Previous research exploring video health messages posted on YouTube has included issues related to prostate cancer (Steinberg et al., 2010), tanning beds (Hossler & Conroy, 2008), tobacco (Freeman & Chapman, 2007), and immunizations (Keelan et al., 2007; Ache & Wallace, 2008). Internet-based video sharing sites like YouTube are a new platform for healthcare providers and public health officials to consider when

conveying health messages. However, few studies have examined how YouTube can be used to disseminate and promote HIV prevention. In order for public health officials to maximise this medium for video-based HIV prevention messaging, research needs to be conducted on existing HIV-related videos to explore the content driving their popularity.

The incidence of HIV among African Americans is nearly eight times that of their white counterparts (HIV Incidence Surveillance Group, 2011). African Americans comprise 14% of the United States population, but represent 44% of new HIV infections (HIV Incidence Surveillance Group, 2011). The disproportionate impact of HIV among African Americans sheds light on the need to identify innovative prevention efforts targeting this population. Previous research suggests that video-based HIV/STD interventions are a promising tool for HIV prevention among African Americans (Calderon et al., 2011; Downs et al., 2004; Heaton & Messeri, 1993; Kalichman et al., 1999; O'Donnell et al., 1998). The success of existing video-based HIV prevention interventions implies that videos will continue to be useful in future prevention efforts. A better understanding of Internet video-based sharing communities, like YouTube, may be a key step in maximising the creation and dissemination of effective HIV prevention initiatives for African Americans.

African Americans are central consumers of Internet-based mobile technology. An estimated 71% of African Americans use the Internet, which can be accessed through various mediums such as personal computers and cell phones (Radio One, 2008). Visiting YouTube and other video-sharing websites is among the most common online entertainment activities for African Americans (Radio One, 2008). In fact, African Americans are 51% more likely to use YouTube than the general online Internet-using population as a whole (Quantcast, 2012). Because of its widespread use and accessibility, YouTube may be an important venue for reaching African Americans at high risk of acquiring or transmitting HIV.

This paper describes the results of a content analysis that was conducted to identify and describe the most popular videos posted on YouTube related to HIV/AIDS and African Americans/Blacks. We further examined the content and comments posted in response to the viral videos identified in our search to explore what made people share those particular videos.

## Methods

The YouTube community consists of video viewers and website subscribers. YouTube requires video owners to subscribe to a free membership in order to post and comment on videos. However, subscriptions are not required to view videos. When posting, video owners enter keywords called “tags” to help users find certain videos or search for particular types of videos. YouTube operates in real time and therefore the content is constantly changing with videos being added and removed. Search strategies were implemented at two different time points to observe changes over time.

Video clips were determined to be eligible if: content focused on HIV/AIDS and video included images or discussion with African Americans or Blacks. Videos were excluded if there was indication that the video clip was filmed outside of the United States or focused on the HIV/AIDS epidemic outside of the United States.

On June 1, 2009 (T1), search strategies were entered into YouTube's (www.youtube.com) search engine to capture videos tagged as African American/Black. The two search terms were limited to the English language. The first search used the keywords *African American and (HIV or AIDS)* and the second search used *Black and (HIV or AIDS)*. The results of each search were sorted by the number of times the

videos were viewed. The top 50 viewed videos in search one and the top 50 in search two were entered into an Excel spreadsheet.

YouTube displays each video's popularity as measured by the number of times the video link has been accessed, commonly referred to as number of "hits". The number of hits was used as a representation for number of times the video has been viewed as well as an implication for the number of times the video was shared with others. Two researchers independently reviewed all videos for eligibility and coded content of the video according to the following variables: category (YouTube's pre-defined topic areas), date posted, tags (keywords video posters used to identify their video), duration of video (in minutes), popularity (number of times viewed), rating (based on a five-point scale [five being the best and one being the worst] by video viewers), number of comments, and identified common themes in video content.

Discrepancies were reconciled through discussion. The preceding search strategy and data collection procedures were repeated again five months later on November 16, 2009 (T2). For the purposes of this study, viral videos were defined as videos that had been viewed over 100,000 times. In order to identify the characteristics of viral videos; additional content analyses were conducted on viewer comments posted for the viral videos identified in our sample. Again, two researchers independently reviewed the original comments on the videos for common themes and discrepancies were reconciled through discussion.

## Results

After combining the top 50 videos for African American/Black and HIV/AIDS there were 35 unique and eligible videos identified at T1 and then 35 again at T2. Only the videos that overlapped at T1 and T2 were included, leaving a total of 28 eligible videos (Table 1). Videos covered a broad range of topics and specific target populations. These 28 videos in the sample were posted between June 24, 2006 and March 16, 2009. The range for the number of views per video was broad (T1 range: 1,061 to 181,299, M=16,288; T2 range: 1,382 to 202,199, M=17,524).

YouTube gives video owners the option of selecting one of 15 pre-established categories to group their video. The videos in our sample represented nine of those categories: Entertainment (N=6), People/Blog (N=5), Education (N=4), Film & Animation (N=3), News & Politics (N=3), Non-profit (N=3), Music (N=2), Science & Technology (N=1), and Comedy (N=1). The top two categories that video owners chose for their videos pertaining to HIV/AIDS were Entertainment and People/Blogs. Our analysis of video content identified the following themes: HIV testing (N=10), HIV transmission and exposure (N=8), HIV treatment and living with HIV (N=7), compassion and advocacy (N=6), HIV education and awareness (N=6), safe sex and using condoms (N=4), youth (N=4), gay men (N=2), men (N=3), women (N=2), and HIV/AIDS conspiracy (N=2).

The top two most frequently viewed videos identified at both T1 and T2 were *Trashman gives 15000 women/Girls hiv aids virus* and *Know Your Status*, each with over 100,000 views. Details on the content and data abstracted for these videos are reported in Table 1. Further examination of these videos shed light on characteristics and possible reasons for their rise in number of hits. Review of the number of views over time reveals that there was an initial explosion of number of hits on both videos that later levelled off. However, the number of views for both videos remained consistent at T1 and T2. Furthermore, other videos identified in our search, although posted prior to the top two videos, never reached their level of popularity. Therefore, the length of time a video is posted did not appear to directly impact the number of views or its popularity.

**Table 1.** YouTube Videos that Overlap at Time 1 and Time 2 (n=28)

T1 Rank	T2 Rank	Title of Video	Description of Video Content	Original Date Posted on YouTube	Category	Tags	Duration (minutes)	No. of views	No. of comments
1	1	Trashman gives 15000 women/Girls hiv aids virus.	Masked African American man who calls himself Trashman, lists some of the 15000 of the women, by name, who he claims to have knowingly infected with HIV.	April 23, 2008	People & Blogs	trashman aids hiv virus girls women 15 000 chronic central black Latino sex awarenessprevention protection	6:43	T1: 181,299 T2: 202,199	T1: 837 T2: 917
2	2	Know Your Status	A former African American adult film actress makes a video documentary of getting tested for HIV.	February 4, 2008	Education	HIV Get Tested AIDS Know Your Status Blood Black HIV/AIDS day February 7th Feb	10:03	T1: 152,426 T2: 154,709	T1: 459 T2: 467
3	3	GurlTalkkTV- The Game of Death - - 1500 Infected	Response to Trashman video- confessions of a black man explaining how he does not respect women but women should respect and protect themselves from black men like him.	January 31, 2008	Education	GurlTalkkTV The Game of Death AIDS sex Sexually diseases STDs virus Hepatitis condoms protection HIV Blood safe semen	9:00	T1: 48,469 T2: 51,308	T1: 215 T2: 215
4	4	Loony-T - She Got It Remix (Parody)	Music lyrics about a man who thinks his girlfriend has an STD/HIV and now he thinks he is infected.	May 15, 2008	Comedy	Loony Looney the and for Toonz Tunes She Got It Remix Parody Pistol s TPain Lil Wayne Plies Young Jeezy STD AIDS  Condom SEX Booty Shake Carter Dolla Fight Punch Kick MTV Bet Crank Dance Diss New Oba	3:41	T1: 18,614 T2: 21,428	T1: 59 T2: 67

						ma Barack Georgia			
5	5	Vivica Fox & Bill Duke Interview	Vivica Foxx and Bill Dukes promote a new independent film <i>Cover</i> about men on the down low (DL), which was inspired by the prevalence of HIV/AIDS in the black community.	March 4, 2008	Film & Animation	interview trailer filmmaker reel Vivica Fox Bill Duke HIV AIDS Down Low Independent film	8:21	T1: 13,803 T2: 16,112	T1: 28 T2: 28
6	6	Mr. Del (Rain Cry) Music Video -From EGM.tv WEEKLY page	A music video with an African American rapper in the rain showing images of woman dancing in rain, washing away all infirmities and God giving new life.	November 29, 2007	Music	Mr Del EGM ethno graphic rap Rain Cry Music Video Miss HIV	3:10	T1: 12,798 T2: 15,486	T1: 82 T2: 82
7	7	All of Us - Trailer	A Trailer of the documentary ALL OF US where a young doctor in the South Bronx embarks on a research project to find out why black women are becoming infected with HIV at alarming rates.	January 3, 2008	Film & Animation	documentary trailer African Ethiopia hiv/aids women black abt emily mehret	2:26	T1: 11,376 T2: 13,265	T1: 7 T2: 8
8	9	ChingoBling : Keep Your Torta Clean	Rap artists encouraging safe sex in a pre performance interview.	July 26, 2006	Music	rap hip hop dj screw cc mhiv djscrew chingo bling torta clean	2:07	T1: 11,291 T2: 12,109	T1: 4 T2: 4

10	8	The Present	An African American woman returning from trip tells her girlfriend about wonderful guy she just met. During the trip he gives her a present to open when she gets home. The present is a box with "welcome to the world of HIV" written inside.	October 11, 2006	Entertainment	Chyna Layne Rayan Lawrence Darrell Smith HIV AIDS young black females girls males african american african-american	3:43	T1: 10,837 T2: 12,522	T1: 27 T2: 27
11	12	Joe Biden Discusses AIDS, Al Sharpton gives the evil eye	Joe Biden discusses HIV prevention during a debate of the 2008 Presidential Election. He mentions working to reduce HIV in black neighbourhoods by holding rallies and telling black men to wear condoms.	June 30, 2007	News & Politics	joebiden alsharpton pbs hiv aids policy politics election08 debates howarduniversity	1:03	T1: 8,467 T2: 8,795	T1: 40 T2: 40
12	10	Fake AIDS / HIV Diagnosis For Black People pt1	The accuracy of HIV tests is discussed.	April 13, 2008	Education	black history central park jogger rape racism slavery antisemitism malcolm pamshouseblend ybf bossip.com	10:00	T1: 8,118 T2: 10,864	T1: 314 T2: 479

14	11	Skorpion Interviews BET's Baldwin Hills Cast Member Etienne Maurice	Etienne, from the television show <i>Baldwin Hills</i> talks about a range of topics, including HIV/AIDS.	March 16, 2009	Entertainment	The Skorpion Show BET entertainment news reality TV show Baldwin Hills Etienne maurice sheryl lee ralph hiv aids activist divas simply singing star moesha dee mitchelle gerren vs tyler black version of the hills viacom d	17:27	T1: 7,097 T2: 8,862	T1: 155 T2: 162
16	18	Sen. Obama on Homophobia and Stigma	A 2008 Presidential debate in which, Senator Obama discusses CDC's report regarding young African-Americans and HIV/AIDS.	July 6, 2007	People & Blogs	African American Homophobia Black Gay Stigma HIV/AIDS Free Speech	1:43	T1: 5,914 T2: 6,263	T1: 11 T2: 12
17	14	SistahGirl: Black Women & HIV/AIDS Documentary First Look	A documentary project that profiles the lives and experiences of HIV-positive black women from the United States who will journey to sub-Saharan Africa to meet other HIV-positive women activists.	November 29, 2007	Film & Animation	SistahGirl Black Women HIV World AIDS Day DryerBuzz Sistributions	5:49	T1: 5,686 T2: 7,219	T1: 9 T2: 14

18	13	I just got a phone call from a young lady... You have to watch this video!!	A young African American male decides to get tested for HIV/AIDS after learning that a previous sexual partner's HIV/AIDS test results came back UNDETERMINED. He explains the difficulty he had finding a testing location. He tested negative.	September 8, 2008	Education	condoms sex porn teen Asian Latina booty black African condom white young people girls lesbian gay breast anal oral ass  tit fuck get fucked cunt dick pussy porno fucking  naked lingerie horny milf hot mom babe fetish AIDS HIV naisha testing beef	9:37	T1: 5,354 T2: 7,229	T1: 36 T2: 38
19	16	Justin's HIV Journal First Entry	Justin B Smith chronicles his experience being HIV-positive to help educate everyone, young, old, black, white, red, yellow, straight and gay.	May 27, 2008	People & Blogs	Justin's HIV Journal Justin B. Smith HIV/AIDS black gay sex GBMNews Baltimore MD	2:41	T1: 5,190 T2: 6,413	T1: 37 T2: 44
21	20	HIV/AIDS Documentary Trailer	A documentary showing the effects that HIV/AIDS has on the African American community. It provides statistical information as well commentary from various movie, television and radio personalities, sports figures.	May 30, 2007	News & Politics	HIV AIDS Documentary Creflo Dollar Mase EX Ministries Craige MTV BET NEWS Program Mo Stegall The SELF SHOW BISHOP CHURCH	2:16	T1: 3,993 T2: 4,553	T1: 17 T2: 17
22	21	AIDS	60 Minute report focusing on an African American woman who is HIV-positive.	January 28, 2007	News & Politics	AIDS HIV NEW YORK	2:36	T1: 3,932 T2: 4,505	T1: 4 T2: 4

23	17	HIV Research: Beyond the Vaccine - KQED QUEST	Chronicles HIV/AIDS in the United States over the past 15 years since the peak of the HIV/AIDS epidemic. It closely examines HIV/AIDS among the African American community and possible reasons for the high prevalence in certain communities. Also discusses the history of HIV/AIDS.	October 16, 2008	Science & Technology	kqed pbs science hiv quest AIDS african american race vaccine california san francisco	11:07	T1: 3,703 T2: 6,270	T1: 1 T2: 2
24	22	Living with HIV	African-Americans discuss living with HIV.	July 31, 2007	People & Blogs	AIDS HIV Health African-American Blacks Illness	7:59	T1: 3,194 T2: 3,642	T1: 0 T2: 0
25	26	Who Can I Talk To, Who Can I Tell - WombWork Productions	Performance of "Who Can I Talk To, Who Can I Tell" by the Nu World Art Ensemble. Based in Baltimore, Maryland, the Nu World Art Ensemble shows through dance and lyrics, the experience of a woman who was told that she was HIV positive.	July 25, 2006	Entertainment	wombwork nuworld nu world art ensemble hiv aids prevention community outreach performance kids teens youth baltimore	2:57	T1: 2,526 T2: 2,687	T1: 2 T2: 2

26	34	A Need to Know	CDC TV - <i>Health Matters</i> discusses how young, old, men, women, gay, and straight can be at risk for HIV/AIDS. HIV/AIDS poses a great risk for African American community men who have sex with men. Promotes getting tested for HIV.	March 16, 2009	Nonprofits & Activism	AIDS GayMen'sHealth HIV HIV/AIDS LGBTHealth Men'sHealth MensHealth MinorityHealth SexualHealth STD SubstanceAbuse TB GayHealth LesbianHealth TransgenderHealth Gay Lesbian	3:24	T1: 2,250 T2: 2,448	T1: 0 T2: 0
27	28	fearful TRUTH	Discusses HIV/AIDS in the African American community of Oakland, California.	June 24, 2006	People & Blogs	HIV. African American Oakland California Alameda County Black Stigma Secrets lies fearful Truth	1:05	T1: 2,202 T2: 2,405	T1: 1 T2: 1
28	24	Deeply Rooted Dance Theater - Jagged Ledges	A lyrical dance performance depicting the plight of people living with HIV/AIDS.	April 15, 2008	Entertainment	Deeply performing arts modern dance african american drdt deeply rooted jagged ledges	4:27	T1: 2,166 T2: 2,885	T1: 7 T2: 7
29	25	The Barbershop	A PSA with two African American men who discuss HIV prevention in a barbershop.	March 16, 2008	Nonprofits & Activism	Trae Tha Truth grassroots outreach nonprofit public service announcements HIV Tattoos AIDS	0:32	T1: 1,497 T2: 2,814	T1: 2 T2: 2
30	31	The Closing Argument (a video book)	The first 10 minutes of a 150-minute video book of an African American man accused of spreading AIDS in	March 26, 2007	Entertainment	AIDS The Closing Argument	10:00	T1: 1,472 T2: 1,634	T1: 0 T2: 0

			Connecticut.						
31	32	Stomp	A PSA by the AIDS Community Resources. African American adolescent girls stomp about being knowledgeable, getting tested, and assertive regarding HIV/AIDS.	January 3, 2007	Entertainment	Commercial PSA Aids HIV Condom use	0:30	T1: 1,454 T2: 1,608	T1: 0 T2: 0
35	33	Standing-n-Truth	This video discusses sex, sexuality, and HIV/AIDS in the African American community.	June 10, 2008	Nonprofits & Activism	Sex Sexuality and HIV/AIDS in the Black community	8:53	T1: 1,061 T2: 1,531	T1: 1 T2: 0 <sup>a</sup>

**Notes**

\* The numbers not listed for Time 1 (T1) and Time 2 (T2) did not appear at both T1 and T2, n=14 total)

\*T1 search was conducted on June 1, 2009 and T2 search was conducted on November 16, 2009

<sup>a</sup> Comments are sometimes removed, which may account for zero comments at T2

At the time of analysis, the most viewed video, *Trashman gives 15000 women/Girls hiv aids virus* had an identical video entitled, *Aids man 'trash Man' fitting Name*, which was not yielded in our search, this video was posted on YouTube by another host. At time two, this duplicate posting had over 1.5 million hits and over 3,000 comments. The content of both the number 2 (*Know Your Status*) and number 3 (*GurITalkkTV-The Game of Death –1500 infected*) ranked videos made direct references to the *Trashman* video posting. This suggests that the popularity of one video may influence the number of hits on other related videos. As a result, one video's popularity may not be independent of another.

Community reaction to the top two videos was assessed using a content analysis of comments posted by viewers (Table 2). The *Trashman* video yielded written comments (N=837) under three major themes: angry threats and insults toward the maker of the video, questions about the authenticity of the video maker's claims, and positive comments supporting the statements made in the video. A number of respondents questioned the authenticity of the video and found it mathematically unlikely for Trashman to have had sex with thousands of women. In contrast, a smaller portion of respondents (approximately 10%) had positive reactions to the video. Some felt the video was an effective tool for educating African American and Latina women about the dangers of unprotected sex. Others supported Trashman's video because they felt the women mentioned in the video were guilty of being promiscuous and not using condoms.

There were 474 comments posted for the *Know Your Status* video (Table 2). Miss Jia, a YouTube blogger and former African American adult film actress, takes viewers with her as she is tested for HIV. Most of the comments posted by viewers were positive. Some shared that they were motivated to be tested for HIV or actually received an HIV test after viewing the video. Several of the viewers asked questions related to HIV.

**Table 2.** Major themes and examples of relevant quotes for of *Trashmangives 15,000 women/ girls HIV AIDS virus* and *Know Your Status* comments section

Trashman	Quotes N=966
Anger and negative threats N=498 (63%)	<p>I am Pissed somebody lock this dumb JERK up what the heck I wannaloose all my Christianity and KILLLLLL HIM!!! (kingdomchild22, 11/2009)</p> <p>This is one sick f[---] he needs to be put somewhere and tortured until he dies I mean slow torture who could so that he has to be a sick sick person and needs to be put under the jail (sweetthang9488, 2009).</p> <p>Wow this dude needs to be castrated. Pathetic. It's people like him that makes us have an imperfect society (saiyyru14, 2009)</p>
Disbelief N=158 (21%)	<p>This is fake cause how is he going to remember all of the firsts and lasts names of all those girls. He is sick cause he made this video. Hopefully this is not true (SHAR383, 11/2009)</p> <p>This man is fake I don't believe this (NyFin3st11, 2009)</p> <p>This had to be a joke cuz if he had sex with a girl everyday</p>

	<p>it would take him 41 yrs to reach 15,000 girls (TheCharleycat, 2009)</p> <p>I look betta than this [n word] and I drive a jaguar and I don't get that much ass so I know he lyin' (Keezy59, 11/2009)</p>
Support for Trashman N=83 (11%)	<p>I don't feel sorry for any of these women because they put themselves in this position, with the aids rate steady increasing why would anyone sleep with anyone unprotected they don't know from Adam?!? they are getting exactly what they deserve (MissOakCliffUSA, 3/2009)</p> <p>That's bad but that will teach them sluts to have unprotected sex with random guys (Straightgenius, 3/2009)</p> <p>Man has a point, women need to learn how to respect themselves and close their damn legs. Not saying I agree with his methodology (stracinsrt4, 2009).</p> <p>"Most people here can't read between the lines to see that you were just giving advice to young women. I understand clearly, it also reminds me that I need to talk to my daughter even more about not having unprotected sex. Thanks. (justin5551212, 2009)</p>
Know your Status	N=474
Appreciation/thanks N=294(77%)	<p>Kudos to you and Nicole...it takes guts to show something this personal (sprat10, 2008)</p> <p>Thanks for the video jia, people need to know (enjois3s, 2008)</p> <p>God Bless, you could have saved lives (reese3005, 2008)</p> <p>Jia I'm so proud of you for steppin up and makin this video. You attract a large audience, and you used that for a good cause. Yay, you!! (homemadegravy17, 2008)</p>
Motivation to get tested N=28 (9%)	<p>wow this has inspired me to get test. I just searched a local testing clinic in the area. Thanks a lot ;) (emjyoath, 2009)</p> <p>I honestly just left a testing site about 2.5 hours ago. This video along with advertisements motivated me to get test. Knowing your status is the business...and I'm glad I am sure of mine now. Also, being negative is the business!!!! ☺ Take care. (reneikad, 2008)</p> <p>Forgot to tell you...I went the week I say this...I'm negative!! (Ceci247, 2009)</p> <p>Thank you for making this video. I watched it so many</p>

	times. This vid[eo] along with my best friend's encouragement I did it. I'm 38 and go my first test today (negative). WHOO HOOO! (nunya33763, 2009)
<p>Questions about HIV and testing N=15 (4%)</p>	<p>negative means you don't have HIV and positive means you do right? (sacabuchi, 2008)</p> <p>Quick question. How much did it cost you to get tested (racso329, 2008)</p> <p>Do you have to be 18+ to get tested (iTRUTHperiod, 2009)</p> <p>isn't he suppose to tell u that u need to come back in 6mo after the last time u had sex to kno[w] if one is truly negative? (bow2jade, 2009)</p> <p>do condoms help prevent HIV? (bow2jade, 2009)</p>

## Discussion

The purpose of this study was to identify and describe viral YouTube videos addressing HIV/AIDS and African Americans/Blacks in order to learn more about the characteristics of and community response to the most popular videos. Our primary findings were related to the content of the videos found, the characteristics of the most popular or viral videos, and lessons learned in searching YouTube to find videos related to HIV/AIDS and African Americans/Blacks.

There were several themes that emerged from the video content. The major themes included the continuum of prevention, from HIV testing, to HIV transmission and exposure, and finally HIV treatment. The videos focused less on specific target groups (youth, gay men, heterosexual men and women) or HIV/AIDS conspiracy theories. The most frequently viewed videos, *Trashman* and *Know your Status*, included negative and positive feedback. *Trashman* had threats, insults, and questions regarding the authenticity of his claims, while *Jia* had positive feedback and support in the *Know your Status* video.

There were several important lessons learned about searching YouTube. Because the assignment of tags is left to the discretion of the video publisher, videos may be labelled with irrelevant tags or missing key words. There is limited direction and no systematic oversight in the assignment of tags. Additionally, flexibility and search controls are limited in YouTube videos when compared to science-related search engines. As a result, we conducted two separate searches to meet our study objectives (African American and HIV/AIDS; Black and HIV/AIDS).

The comments section was a key mechanism for identifying community responses to the video. The viral videos generated the most viewer comments and the amount and content of comments posted on these videos may be a reflection of the emotion generated by the video. Having a strong reaction to the video content may have inspired viewers to pass the video along to others or motivated them to post comments. For the two viral videos identified in our study, the most common sentiments generated in video comments were anger towards *Trashman* and positive support for *Know your Status*. Previous research suggests that situations, news, or information (both positive and negative) which heightens arousal boosts social transmission (Berger, 2011). Eckler and

Bolls (2009) found that college students reported having the strongest intent to forward viral video ads with pleasant emotional tone. In another recent study by Berger and Milkman (2011) examining how content characteristics impacted the “most emailed” New York Times articles, researchers found that content evoking high positive arousal (awe) or negative arousal (anger or anxiety) were more likely to go viral. These findings suggest that HIV-related videos that elicit anger and frustration or those that inspire encouragement and support may motivate people to share the videos.

One feature that makes online video viewing sites unique and novel is the reliance on user-generated content. As a result of online video sharing sites like YouTube, anyone has access to a worldwide audience. In the past, health-related videos could only be circulated and disseminated by organisations and agencies. This user-generated online video market has reshaped possible forums for delivering health messages. Perhaps the popularity of top videos measured in terms of numbers of views and viewer comments can be attributed to a video blogger featured in the video. It is possible that video bloggers like Trashman and adult film actors like Ms.Jia draw or capture the attention of a broad audience. Internet video bloggers may be an untapped resource for accessing high-risk target populations.

Our study has the following limitations. This research was conducted in 2009 amidst the initial surge in social networking sites like Facebook and Twitter. The introduction of these mediums vastly increased the ability to share the video beyond the traditional YouTube community members, forwarded emails, and blogging sites. The growth in these social networking sites created new and different pathways for going viral. It is important to also note that the definition of viral video in this study is specific to the videos identified in our sample. Within the larger sample of all YouTube videos the most popular viral videos have hits/views in the millions.

## Conclusion

YouTube provides a new opportunity, resource, and venue for the widespread dissemination of public health messages. The site continues to introduce new features to enhance interactive capabilities and descriptive information collected about the video viewers. This information could be used to learn more about the demographics of a population (age, location, gender) who watch a particular video, and the types of videos that appeal to specific audiences.

New forms of media and technology, like the Internet-based social networking sites that are accessible via smartphones (e.g., Facebook and Twitter), have introduced a different landscape for communicating and connecting with people. The potential impact of these media for HIV prevention messaging has yet to be fully understood. In light of the disproportionate impact of HIV on subgroups in the US population, such as African Americans, it is imperative that we consider new and innovative HIV prevention approaches for this population. Moreover, given the current economic climate of sparse resources, free and accessible resources like YouTube should be considered for public health initiatives. Future research that focuses on developing video-based health messages that evoke strong emotions may be useful in creating HIV prevention videos that the public is motivated to share. There is still more to learn about how web-based resources like YouTube can reach persons at the highest risk of acquiring and transmitting HIV/AIDS.

## Disclaimer

The findings and conclusions in this report are those of the authors and do not necessarily represent the views of the Centers for Disease Control and Prevention.

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