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Going social: Success in online recruitment of men who have sex with men for prevention HIV vaccine research

Lindsey Buckingham^a, Julie Becher^a, Chelsea D. Voytek^a, Danielle Fiore^a, Debora Dunbar^a, Annet Davis-Vogel a, David S. Metzger a,1, Ian Frank a,b,*,1

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ABSTRACT

Objective: To compare the use of four different social media sites to recruit men who have sex with men (MSM) and transgender women to a phase 2b HIV prevention vaccine trial, HVTN 505.

Design: Retrospective, observational study.

Methods: The University of Pennsylvania HIV Vaccine Trials Unit (Penn HVTU) employed street outreach and online recruitment methods to recruit participants for HVTN 505 using a combination of national recruitment images/messages with Philadelphia-specific language and imagery. We compared the efficiency (number of enrolled participants per number of completed phone screens) and effectiveness (number of enrolled participants per time interval employed) of each strategy, as well as the demographics and risk behaviors of the populations.

Results: Online recruitment strategies populated 37% (71/191) of trial participants at our site. Among the four social media strategies employed, 45.1% (32/71) were enrolled through Facebook, 16.9% (12/71) through Craigslist, 15.5% (11/71) through a web-based marketing company (WBMC), and 22.5% (16/71) via GRINDR. The number of participants enrolled per month of strategy and the months the strategy was employed were Facebook - 32(33 months), Craigslist - 12(33 months), WBMC - 11(6 months), and GRINDR - 16(0.56 months). In-person and online recruitment strategies yielded participants of similar demographics and levels of risk behavior.

Conclusion: Use of several social media recruitment modalities produced large numbers of MSM engaging in high risk behavior and willing to participate in an HIV prevention vaccine trial. In comparison to other social media and online strategies, recruitment via GRINDR was the most effective.

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1. Introduction

Recruitment strategies for large scale clinical trials require constant innovation and flexibility as successful strategies may wane over time. Recruitment for HIV prevention trials, compared to treatment studies, is often more labor intensive given the absence of a population of potential participants already under medical care. In-person outreach has been the primary strategy for recruitment of human subjects to HIV prevention trials [1-5]. This approach relies on recruiters being in the right place at the right time to engage with potential study participants, necessitating person hours and resources spent locating and interfacing with poten-

* Corresponding authors at: 502 Johnson Pavilion, 3610 Hamilton Walk, Philadelphia, PA 19104-6073, USA.

at increased risk for HIV acquisition. Outreach targeting MSM or trans persons can require engagement outside of traditional business hours, including late night locations. The internet has added a new dimension to recruitment for HIV prevention trials as it greatly reduces the virtual distance between recruiters and potential subjects. As the internet has grown, the ways people meet and socialize have evolved. Internet chat-rooms gave way to social networking and dating sites, which are now mobile in the form of smart phone applications (apps). In order to effectively recruit human subjects and keep pace with current technologies, clinical trials have looked to these alternative platforms for study recruitment.

tial subjects, especially when recruiting within specific populations

Use of the internet and internet-based social media to reach large numbers of MSM, has been widely reported as a feasible recruitment strategy [1-17]. A 2006 meta-analysis reported that 64-99% of MSM find partners online [18]. It has been estimated

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^a HIV Prevention Research Division, Department of Psychiatry, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA

b Division of Infectious Diseases, Department of Medicine, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA

E-mail address: franki@mail.med.upenn.edu (I. Frank).

¹ Co-senior authors.

that 48% of young MSM use the internet to find partners, and 50% of MSM spend 2–3 hours per week meeting partners online [19–21]. Banner advertisements on internet venues frequented by MSM have been successfully employed to recruit large numbers of MSM for screening and to collect behavioral data [2,13,15]. GRINDR is a smart phone based geosocial networking application targeted to MSM that is often used for finding sex partners. The app uses GPS technology to display the profiles of other users in the immediate area arranged in ascending order by distance. GRINDR has been used to recruit subjects for behavioral studies in Los Angeles and New York City [10,12,14,17], and for a trial evaluating the acceptability of a rectal microbicide [1].

The University of Pennsylvania HIV Vaccine Trials Unit (Penn HVTU) utilized multiple forms of online social media to recruit large numbers of participants into the HIV Vaccine Trials Network (HVTN) 505, a phase 2b study evaluating the safety and efficacy of a multivalent HIV DNA prime/boost vaccine in MSM and transgender women [22]. Recruitment began in Philadelphia in June 2009 and continued through March 2013, when the study was halted. In this paper, we compare the effectiveness, the number of enrolled participants per time interval employed, and efficiency, the number of enrolled participants per number of completed phone screens, of four online methods used to recruit at-risk MSM, as well as the demographic characteristics and risk behaviors of potential research subjects identified through on-line and in-person community outreach.

2. Methods

2.1. Recruitment materials

The Penn HVTU employed multiple images and slogans in our street outreach and online recruitment strategies. Images and slogans were disseminated via study fliers, in traditional newspaper advertisements, on posters at bus stops and train stations, on the Penn HVTU website (www.phillyvax.org), and on giveaway materials. Similar images were used during in person street outreach recruitment or in online advertising.

2.2. Online recruitment methods

2.2.1. Facebook

Facebook is a popular social networking site in which users create personal 'profiles' and share photos, news, and other information. Advertising via rotating side bar ads targeted to specific users is a widely utilized service offered on the site. The above described images were used to advertise on Facebook beginning in June 2009. Target users were between the ages of 18-50; they identified as male, interested in men, and had an address within a 25-mile radius of Philadelphia City Hall. Initially, individuals who clicked on an ad were redirected to www.hopetakesaction. org, the HVTN Core recruitment website. Individuals could find nearby trial sites and complete a contact form, which was directed to local site staff via email. In February 2011, the Penn HVTU instituted a Philadelphia-specific contact form on the website, www. phillyvax.org. A daily budget of \$50 was set to pay for individuals who clicked on our ad (average cost per click of \$1.37). From this time forward, individuals clicking on a Facebook ad were sent directly to this site where they could complete a contact form. Submitted forms were automatically emailed to study staff.

2.2.2. Craigslist

Craigslist is a free, city-based, online bulletin board for advertisement of goods and services. Both the HVTN Core and the Penn HVTU advertised on Craigslist during the recruitment phase of

HVTN 505. The Penn HVTU began advertising on Philadelphia's Craigslist under the 'volunteering' heading in July 2010. Ads initially relied on text describing the study, though later an image depicting a MSM was used along with the "I have a heart on" slogan. Posts were made every one to two weeks. For the duration of Craigslist advertising, interested parties were directed to the national www.hopetakesaction.org website, and completed contact forms.

2.2.3. Web based marketing company (WBMC)

WBMC is a research company that specializes in contacting LGBT individuals based on expressed interests. The Penn HVTU contracted with WBMC on two occasions to recruit potential trial participants. Together, WBMC and the HVTU developed a recruitment message that was emailed to MSM ages 18–50 who participated in the company's consumer marketing research panels and lived within a 50-mile radius of Philadelphia. Interested individuals answered two questions: (1) Are you a man or transwoman who has sex with men? and (2) Are you between 18 and 50 years old? Respondents who answered yes to both questions were asked to provide first name, telephone number, and email address that the company then provided to the HVTU.

2.3. GRINDR

In October 2012, recruitment images and slogans were repurposed for GRINDR advertisements. Each ad included the local phillyvax.org website, and the site's toll free telephone number. Advertising 'blasts' ran during predicted high-traffic weekends and holidays, and reached users within a 30-mile radius of the Penn HVTU. Advertisements appeared to GRINDR users for a total of 17 days. Four techniques were implemented to assure that potential subjects saw advertisements multiple times during a session of GRINDR use: (1) Multiple versions of HVTU banner ads appeared in rotation with other advertisements at the bottom of a user's smartphone screen while the application was open. (2) Entire weekend periods of 'road-blocking' in which only HVTU banner ads appeared. (3) Dialogue box pop-up ads with the slogan "Got a Heart on...For an HIV vaccine? Call 866-HIV-PENN to find out how you can help. Compensation is available," that appeared each time a user opened the application. Users were required to select "more" or "no thanks" before proceeding on to use the app. (4) 'Interstitial ads' or full-page advertisements that covered the screen when a user 'blocked' another user's profile. Each blocking event triggered a full-page Penn HVTU ad, which appeared in rotation with other advertisements. As with other methods, clicking on any advertisement directed the user to the phillyvax.org website, and contact information forms.

2.4. In-person outreach

Study staff traveled to areas in and around Philadelphia with known venues for reaching MSM and transgender women. Some recruitment efforts coincided with large LGBT pride events. Staff engaged potential participants, explained the study, answered questions, and solicited contact information.

2.5. Screening

Study staff attempted to reach individuals who provided contact information for a preliminary eligibility phone screen. Contact attempts were ceased after three phone calls and two emails if the individual did not respond. Eligible participants were invited to the HVTU clinic office for a face-to-face visit where they completed informed consent, and underwent further screening.

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