HEALTH EDUCATION RESEARCH Vol.26 no.5 2011
Pages 795–807
Advance Access publication 17 January 2011

hivstigma.com, an innovative web-supported stigma reduction intervention for gay and bisexual men

Barry D. Adam[1,2]*, James Murray[3], Suzanne Ross[4], Jason Oliver[5], Stephen G. Lincoln[5] and Vicki Rynard[4]

[1]Department of Sociology, Anthropology and Criminology, University of Windsor, 401 Sunset Avenue, Windsor, Ontario, Canada N9B 3P4, [2]Ontario HIV Treatment Network, 1300 Yonge Street #600, Toronto, Ontario, Canada M4T 1X3, [3]AIDS Bureau, Ministry of Health and Long-Term Care, 5700 Yonge Street, 5th floor, Toronto, Ontario, Canada M2M 4K5, [4]Health Policy Strategies, 304 Herkimer Street, Hamilton, Ontario, Canada L8P 2J1 and [5]Ontario AIDS Network, 468 Queen Street East #105, Toronto, Ontario, Canada M5A 1T7.

*Correspondence to: B. D. Adam. E-mail: adam@uwindsor.ca

Received on March 13, 2010; accepted on November 6, 2010

Abstract

An intervention to address stigma directed toward HIV-positive men and to enhance the sexual health of gay and bisexual men was developed through a community-based process involving HIV prevention workers, public health, government and researchers. The intervention aimed to diminish stigma, create greater support for HIV-positive men, make disclosure safer and easier, discourage reliance on disclosure to prevent transmission and encourage testing. The question, 'If you were rejected every time you disclosed, would you?' was widely disseminated in the gay community and supported by the Web site, hivstigma.com, to encourage participation in blog-based discussions. Eight bloggers moderated lively discussions over 5 months. There were 20 844 unique visitors to the site averaging more than 5 min each; 4384 visitors returned more than 10 times. About 1,942 men answered a pre-test survey on a popular gay dating site and 1791, a post-test evaluation. Results show a statistically significant shift among those aware of the intervention toward reduced stigma-related attitudes and behaviors and toward recognition that HIV-positive gay men face stigma in the gay community and that stigma reduces the likelihood of HIV disclosure.

Introduction

This paper reports on the creation, implementation and evaluation of an innovative web-supported stigma reduction intervention for gay and bisexual men. The identification of HIV-related stigma as a priority for a province-wide campaign arose from a lengthy community-based committee process. Local research also showed the role of stigma in the difficulties experienced by HIV-positive men in disclosing serostatus and in the perceptions and assumptions that set the stage for high-risk sexual encounters. Out of this process came an ambitious strategy intended to move beyond telegraphic social marketing messages often directed toward gay and bisexual men toward a plan to engage local communities in reflecting on and advancing an ethic of social interaction that aims to reduce HIV transmission and enhance the well-being of HIV-positive people. Perceiving that gay and bisexual men have become somewhat inured to repeated safe sex messaging, this intervention sought to connect with the concerns and risk perceptions of men by encouraging them to participate in discussions hosted on a new Web site, hivstigma.com. The intent was to engage the discourses of moral reasoning and sexual decision making circulating in local communities of gay and bisexual men and to stimulate community building by providing a forum for

doi:10.1093/her/cyq078

dialogue that could affect local cultures to enhance sexual health. The effectiveness of the intervention was gauged through a pre-test and post-test survey of men solicited primarily through a popular gay contact Web site that was completely independent of the intervention [1].

Design and objectives

The hivstigma.com campaign, then, was grounded in the community mobilization model developed through the 1980s and 1990s that succeeded in generating a cultural shift toward safer sex and played a major role in reducing HIV transmission in gay communities [2–7]. This community mobilization model was realized both as process and as intervention. The primary forum for the generation of the intervention was a year and a half of meetings of the Gay Men's Sexual Health Alliance (GMSH), a broad-based consortium of community members drawn from frontline HIV prevention work, along with representatives from public health, government and research plus staff support from the provincial government, the GMSH and a marketing design firm. This lengthy set of community meetings included strong representation of HIV-positive gay and bisexual men and men drawn from diverse ethnoracial communities, who worked on identifying the campaign priorities, theme and byline. The intervention was also conceived as a form of community mobilization, where community members devised a campaign to stimulate dialogue about stigmatizing attitudes and practices among themselves rather than as a 'behavior change technique' [8] that would typically be designed and implemented by professionals with a preset bounded audience of paid volunteers. As Bos *et al.* [9] argue, successful antistigma interventions must make people 'aware that stigma exists, that it can take certain forms, that is harmful, and that each person can contribute to reducing stigma … , should create a safe environment to discuss stigma-related values and beliefs, … should use the language of the target population … [and] PLWHA should be involved in AIDS stigma-reducing interventions at all levels.'

Stigma is perhaps best conceived as a form of social exclusion [10] that limits opportunities and life chances and can lead to psychological distress [11]. It can also influence situations of vulnerability for HIV transmission in sexual interactions where potential partners interpret risk by bringing sometimes conflicting and inaccurate assumptions to bear in making decisions about safe sex [12]. These assumptions, in turn, tend to be embedded in sometimes incompatible discourses carried by different circuits of men in local gay scenes [13]. In a number of instances, HIV-positive and HIV-negative men bring different assumptions to bear in interpreting a partner's willingness to have unprotected anal intercourse (UAI), with some positive men presuming that only positive partners would be willing to do so, while some negative men presume the opposite, an interaction that has been observed in other cities as well [14–27]. The persistence of assumptions about serostatus tends to be connected to the anxieties and difficulties experienced by HIV-positive men in disclosing their serostatus to new people [25, 28, 29], which, in turn, stems from the anticipation of rejection and fear of others revealing this information within social networks. This was a primary form of stigma identified by HIV-positive men engaged in the community process and it is a form of rejection experienced within a larger context of HIV stigma prevalent in the surrounding society [30–32].

The hivstigma.com campaign was a community-level intervention, premised not primarily on an information bite or telegraphic command but on a question, 'If you were rejected every time you disclosed, would you?' The social marketing campaign centered on this question was intended to be sufficiently provocative to encourage public reflection and conversation and to invite men to a Web site where the implications of HIV stigma could be addressed in a web-based public forum. The objectives were to

- raise awareness that HIV stigma is negatively impacting the health of gay and bisexual men and their ability to prevent transmission of HIV;

- reduce stigmatizing practices directed toward HIV-positive men by appealing to HIV-negative men to consider how their actions and messages harm, reject or discriminate against them;
- encourage HIV-negative men to reflect on how rejecting men who do disclose their HIV (positive) status ultimately discourages disclosure and
- engage the discourses circulating in local communities of gay and bisexual that inform risk assessment and safer sex decision making.

The intent of the web forum was to draw members of local gay communities into reflecting on, and moving forward, an ethic of social and sexual interaction. The web forum sought to cultivate civil society insofar as it provided an accessible virtual location where participants could move beyond the conversations occurring inside their own social networks—or even inside their own minds—to a more broad-based community-level discussion concerning the interactional dynamics that engender stigma and situations of vulnerability to HIV transmission. The campaign, consisting of traditional media advertising, local community outreach and the website, was an attempt to instigate a process to affect local cultures in a way that could enhance sexual health.

The byline, 'If you were rejected every time you disclosed, would you?,' did not invite a quick reflex answer but was intended to initiate a dialogue that could open a set of complex issues. In a social context where the Canadian judiciary is asserting disclosure as an obligation of HIV-positive people before engaging in sex where there is a significant risk of passing on HIV, the question, 'If you were rejected every time you disclosed, would you?,' invited a dialogue around such issues as:

- the disjuncture between emerging case law constructing an obligation to disclose versus a common sentiment in the gay community that disclosure is unnecessary if safer sex is practised;
- questioning the reliance on disclosure of HIV status as a primary method of preventing HIV transmission over the consistent practice of safer sex;
- the problems inherent in assuming that HIV-positive men will disclose their HIV status before engaging in unprotected sex or when serosorting because (i) this underestimates the difficulty of disclosure on the part of HIV-positive people who must repeatedly negotiate between an obligation to disclose and a fear of rejection by sexual and intimate partners, and (ii) this approach is premised on prospective sexual partners accurately knowing their HIV status when an estimated 30% of HIV-positive gay men are undiagnosed [33] and
- the importance of safer sex, not disclosure, as the more effective HIV prevention technique.

In addition, by reducing stigma, the HIV stigma campaign might be able to foster a social environment where (i) HIV-positive men feel greater social support, are less vulnerable to depression and anxiety and thereby experience improved sexual health; (ii) perhaps paradoxically (or better said, dialectically), HIV-positive men could find it easier to disclose if the prospect of mistreatment was lessened and (iii) those who had not (recently) been tested for HIV could feel greater security in discovering their HIV status with less fear of stigmatization. In short, the campaign and Web site attempted to make a contribution toward ameliorating some of the underlying social and psychological determinants that have been linked to unsafe practices as research evidence links such factors as depression and lack of social support to HIV vulnerability [12, 23, 34–38].

Implementation

The launch of the HIV stigma campaign took a three-pronged approach: (i) development of a province-wide advertising strategy; (ii) creation of a range of promotional materials delivered by frontline outreach workers across the province and (iii) development of an attractive, professional

and interactive Web site that would provide essential information, referrals and a community forum moderated by eight blog facilitators. A single graphic with the campaign byline superimposed on a schematic image of two partially clothed bodies in apparently intimate contact served as the branding for the campaign and the lure to bring participants to the Web site (Fig. 1).

This graphic was circulated on billboards, in print media (gay, entertainment and ethnocultural media in 14 languages), in online advertisements and in outreach materials (condom packs, posters, T shirts and postcards) distributed to gay venues by HIV prevention workers in ASOs across the province. The GMSH and the health ministry partnered with 25 ASOs across the province plus sexual health clinics, public health units and other community-based organizations with HIV programming or gay clientele. Prevention workers from partner ASOs participated in a one-day orientation workshop in advance of the campaign launch.

The campaign organizers worked with a professional ad design agency, Top Drawer Creative Inc., to develop the campaign tools and promotional strategies. Seven campaign concepts were focus tested through two in-person focus groups, one of HIV-positive and one of HIV-negative gay men as well as an online survey of over 300 men from across Ontario. Participants were drawn from diverse ages and ethnoracial backgrounds. The focus test data were reviewed by committees of the GMSH and a final creative was selected.

The campaign Web site included an introductory sequence that featured the creative with 'yes' and 'no' click boxes. Once the reader chose an answer, he would see a quick animated informational introduction delivered by a professional actor that focused on a few basic points: how stigma discourages disclosure; that 30% of HIV-positive men who have sex with men do not know they are positive; 17% of gay men in Ontario are HIV positive; disclosure cannot be relied on as an HIV prevention technique and stigmatizing potential sex partners with HIV does not help avoid HIV transmission. The Web site's main page featured the eight campaign blog facilitators, a diverse group of HIV-positive and HIV-negative gay men, an interactive quiz game as well as links to information and referrals. Each blogger showed a thumbnail picture with a link to a short video where they set out in their own words the issues associated with the objectives of the intervention.

Fig. 1. hivstigma.com campaign graphic.

The Web site and blogs

Statistics kept on the Web site (from October 2008 to February 2009) showed that 20 844 unique visitors (80.4% from Ontario) came to the site and averaged a comparatively long 5 min and 47 s on the site during their visits. Visitors to the Web site viewed an average of 4.86 pages per visit. Some 4384 visitors returned more than 10 times to the site to view or post comments.

Lively and lengthy discussions unfolded on the eight blog sites during the 5 months of the intervention covering such topics as the sources, forms and consequences of HIV stigma; what stigma and rejection mean and how they might be better conceptualized; problems of avoiding HIV versus avoiding HIV-positive persons and the relational and emotional consequences of the latter; parallel and intersecting stigmas experienced around homophobia, age, race and trans/gender; how HIV stigma and rejection might be challenged; the ethics and practicalities of disclosure; implied versus explicit disclosure; the difficulty and situationality of disclosure; responsibility and (informed) consent in HIV transmission; ideals and divisions in making gay community; community building versus stigma

and the morality of disclosure and HIV risk taking. A full analysis of the complex discourses that emerged on the Web site exceeds the parameters of this paper and will be presented separately. Concluding remarks posted by two of the blog facilitators give a sense of the range of issues covered during the intervention period.

From Tim's blog

We have covered a lot of ground, from experiences in the baths and people's reactions when poz people 'come out' to the etiquette of asking and telling, how stigma, pozphobia and (recently) criminalization produce silences and the different assumptions that poz and neg guys bring to sex in the middle of that silence. Finally, we mused about poz pride as a strategy to fight pozphobia, and there was a discussion about whether talk about poz pride and attention to poz guys might make being poz cool—and therefore encourage people to want to seroconvert … . Some of the reactions to this discussion and especially discussions around criminalization have been that poz people are projecting themselves as victims in order to cover 'irresponsible' behavior. That in fact we are avoiding the responsibilities that come with the rights … . We have countered that pozphobia and discrimination often make it difficult to disclose. Sometimes our arguments have made me feel uncomfortable. I think that we have to reaffirm our responsibility to 'come out' if anything we are doing puts someone else at risk. What's more, I think this debate has also made clear an added responsibility for poz people—to fight against pozphobia, to ensure that the risks and consequences of disclosing are not so great as to prevent anyone from doing it.

From Vijay's blog

In considering what it means to be a young HIV-negative gay guy of color trying to navigate my way through the world of HIV and related fear, shame and guilt, I have found myself asking some really difficult questions. Some of my blogging is reflective of those exponential thought processes, and I hope of my growth as well. Before this campaign, I had always placed myself in the very positive yet sedentary category of 'ally' when it came to the issue of HIV stigma. My understanding of the issue, not unlike the understanding of many other HIV-negative gay guys I know, merely followed the linear '1. I do not have HIV, 2. this is not really an issue for me and 3. I do not think I discriminate against positive guys model of thinking.' Through the rich and albeit at times difficult emotional dialogue that I have participated in through this Web site, lunchrooms, bars and sidewalks stemming from the campaign, I have learned and come to a realization of where and how I fit into the picture—and it was not always pretty. There were a lot of things that I was doing (not discussing serostatus before sex, buying into 'clean-UB2' type language, etc) that negatively contributed to the experience of positive guys. Digging a little deeper, I found that a lot of the reasons that I was engaging in these harmful behaviors was because I did not realize how it was impacting HIV stigma—there was NO DIALOGUE in my community, social networks or otherwise. But I hope that this is changing. I believe this campaign is an important beginning step in that change.

Evaluation methods

The campaign evaluation was conducted by two independent consultants (SR and VR) working in consultation with the GMSH. A full evaluation report is available [1]. Evaluation of community-level interventions, and particularly interventions with multiple objectives, can be especially challenging. The 'community' population typically has fuzzy boundaries at best and is not easily accessed. Sorting the effects of an intervention from surrounding sociohistorical inputs into beliefs and practices also poses methodological challenges. The evaluative approach reported here proceeded through several steps:

Members of a popular gay contact Web site were invited by e-mail to fill out a web-based pre-test in

September 2008 to gauge stigma-related attitudes, beliefs and behaviors, risk practices and demographics of respondents, $N = 1942$

1. Members of the same Web site were invited at the end of the intervention in April 2009 to complete a post-test survey, $N = 1791$. In addition to the pre-test questions, the post-test asked a number of questions about awareness of the intervention and the media through which respondents became aware of it.
2. The demographics of the survey participants were compared between the pre-test and post-test and analyzed using chi-square tests. Awareness rates for the post-test sample by demographics were investigated and analyzed using chi-square tests. The responses to stigma-related survey questions of survey participants who were aware of the intervention were compared with unaware participants (including the pre-test respondents) using logistic regression controlling for time and demographics. The responses to each HIV stigma-related survey question were categorized into two groups (agree versus. did not agree) and treated as dependent variables. A multivariable logistic regression for each outcome question was run to assess the effect of the intervention while controlling for time (pre-test/post-test), sexual identity (gay or homosexual, bisexual, straight or heterosexual and other), age (under 25, 25–34, 35–44, 45–54 55 and over), place of residence (Eastern Ontario, Greater Toronto, Northern Ontario, Ottawa and area and Southwestern and Central), education (high school, 1–2 years college or university, 3 or 4 year degree and postgraduate or professional degree), HIV status (positive, negative or unknown) and sexual risk (UAI with a casual male partner of unknown or different status, UAI with a casual male partner of the same status and no UAI). This modeling produced adjusted odds ratios reflecting the odds of agreeing to the question for the aware group in comparison with the unaware group. A 0.01% significance level was used to identify significant effects.

By comparing pre-test and post-test samples, it was possible to see if unaware respondents had changed over the period of the intervention and whether respondents who became aware of the intervention showed a change. Post-test respondents who were aware of the intervention were also compared with post-test respondents who were unaware of it. Because some men may have responded to both the pre-test and post-tests, there is likely some violation of the regression model's assumption of independence between pre-test and post-test samples. This evaluation did not have the ability to identify those particular respondents and therefore could not adjust for the correlation. However, any consequential effect on the results is attenuated by the large sample and tight significance cutoffs.

Results

The demographic profile of respondents in the pre-test and post-test was very similar (see Table I). Only two dimensions showed a statistical difference from the pre-test to the post-test: (i) a higher number of 'unknown or unclassified' in the ethnocultural category in the posttest ($N = 83$, 4.6%) compared with the pre-test ($N = 30$, 1.5%) and (ii) more HIV-positive respondents ($N = 146$, 8.2%) in the post-test compared with the pre-test ($N = 112$, 5.8%). The greater willingness of respondents to disclose seropositivity in the post-test may itself have been influenced by the effect of the intervention as seropositivity among those aware of the intervention was 13.1% compared with 4.5% among those not aware.

The profile of respondents aware of the intervention was as follows: overall, 42.2% ($N = 756$) reported awareness of the intervention. There was a strong gradient of awareness by sexual orientation: gay-identified men were more aware of the intervention than bisexuals and bisexuals more than heterosexual-identified men (see Table II). Younger men were more aware than older. Men living in major cities were more aware than those in smaller centres or rural areas. Better educated respondents were more aware. HIV-positive men were more

Table I. *Summary of pre- and post-survey samples by demographics*

	Pre (n = 1942)		Post (n = 1791)		P value[a]
	Frequency	%	Frequency	%	
Sexual identity					
Gay or homosexual	1296	66.7	1170	65.3	
Bisexual	578	29.8	551	30.8	
Straight or heterosexual	32	1.6	36	2.0	
Other[b]	36	1.9	34	1.9	0.74
Age (years)					
Under 25	202	10.4	180	10.1	
25–34	341	17.6	472	26.4	
35–44	543	28.0	521	29.1	
45–54	532	27.4	508	28.4	
55 and over	324	16.7	290	16.2	0.76
Country of birth					
Canada	1688	86.9	1528	85.3	
Other	254	13.1	263	14.7	0.16
Residence					
Eastern Ontario	130	6.7	112	6.3	
Greater Toronto	906	46.7	842	47.0	
Northern Ontario	140	7.2	105	5.9	
Ottawa and area	241	12.4	221	12.3	
Southwestern and Central	525	27.0	511	28.5	0.46
First language					
English	1666	85.8	1511	84.4	
French	138	7.1	126	7.0	
Other	138	7.1	154	8.6	0.24
Ethnic or cultural heritage[c]					
European (British, French, Eastern, Northern, Southern)	1626	83.7	1393	77.8	
Aboriginal	81	4.2	97	5.4	
Asian (East, Southeast, South)	94	4.8	114	6.4	
Other	111	5.7	104	5.8	
Unknown or unclassified	30	1.5	83	4.6	*0.00
Education					
High school graduate or less	427	22.0	365	20.4	
1–2 years college or university	640	33.0	581	32.4	
3 or 4 year degree	463	23.8	443	24.7	
Postgraduate or professional degree	412	21.2	402	22.4	0.54
Household income					
$0 to < $50 000	661	34.0	627	35.0	
$50 000 to < $100 000	755	38.9	642	35.9	
$100 000 or more	371	19.1	346	19.3	
Refused	155	8.0	176	9.8	0.11
HIV status					
HIV positive	112	5.8	146	8.2	
HIV negative	1561	80.4	1367	76.3	
Unknown	269	13.9	278	15.5	*0.00
Sexual risk					
UAI with a casual male partner of unknown or different status	412	21.2	382	21.3	

Table I. *Continued*

	Pre (n = 1942) Frequency	%	Post (n = 1791) Frequency	%	P value[a]
UAI with a casual male partner of the same status	403	20.8	292	16.3	
No UAI	1127	58.0	1117	62.4	*0.00

[a]P value of the chi-squared test of homogeneity (independence of proportions). Significant differences with P values of 0.05 or less are marked with an asterisk. [b]Other includes 'two-spirited' and 'other (please specify).' [c]'Aboriginal' includes all respondents who indicated aboriginal regardless of other indications. 'Asian' includes anyone not aboriginal who indicated Asian. 'Other' includes anyone not aboriginal or Asian who indicated an ethnicity other than European. 'European' includes anyone who indicated European and not aboriginal, Asian or Other. 'Unknown or unclassified' includes respondents who did not indicate any of the choices provided and either provided no text or unclassifiable text.

aware than men who were HIV negative or of unknown status. Men who reported UAI with a casual male partner of unknown or different status were more aware, and men who reported UAI with a casual male partner of the same status were also more aware, than those who reported no UAI.

Awareness did not vary significantly by country of birth, first language or income. Over 75% of men who were aware of the campaign were exposed to three or more types of campaign media. Of those aware of the overall campaign, 71.8% were exposed to print media, 69.3% were exposed to other on-line promotions, 68.9% were exposed to campaign promotion products, 55.7% were exposed to outdoor public media, 50.9% were exposed to community outreach activities and 25.9% were exposed to the campaign Web site or blogs. No one medium or strategy dominated across multiple questions in relation to campaign effect. It appeared that all three components of the campaign—the Web site, traditional advertising and community outreach with campaign materials—were necessary to realize the campaign effect.

Table 3 shows the effect of being aware of the intervention on selected survey results controlling for time, sexual identity, age, place of residence, education, HIV status and sexual risk. The effect of time is also shown in the table. Respondents aware of the intervention were significantly ($P <$ 0.001) more likely to agree to the following questions when compared with pre-test respondents and unaware post-test respondents:

- I think gay men with HIV are reluctant to disclose their HIV status to their sexual partners because they do not want to be rejected.
- I think gay men with HIV face stigma and discrimination within the gay community.

They were significantly ($P < 0.001$) less likely to agree that:

- If a gay man has HIV, there is no excuse for him not to talk about his HIV status before having sex with a new partner.
- I use terms like 'clean' or 'disease-free' when I cruise for sex on-line … . (always, usually or sometimes versus never. This question was not applicable for 242 respondents (n = 3491).)
- I seek sex partners with the same HIV status as mine as a way to prevent HIV transmission.

That there is very little time effect in Table 3 shows that there likely were not changes to the social context that could be explained by the campaign having an effect on the unaware. In addition, a corresponding post-test analysis (not shown) produced very similar campaign effects indicating that the presence of latent factors affecting both responses to stigma-related questions and awareness is unlikely to exist and pointing toward the robust nature of the results. A separate subanalysis

Table II. *Stigma campaign awareness overall and by categories of analysis*[a]

	Stigma web surveys (n = 1791)		
	Frequency aware	Total in category	Percent of category aware
All groups	756	1791	42.2
Sexual identity Q2			
Gay or homosexual	614	1170	52.5
Bisexual	120	551	21.8
Straight or heterosexual	4	36	11.1
Other[b]	18	34	31.4
Total	756	1791	42.2
P value[c]			<0.001**
Age group Q3			
Under 25 years	83	180	46.1
25–34	142	292	48.6
35–44	247	521	47.4
45–54	186	508	36.6
55+	98	290	33.8
Total	756	1791	42.2
P value[c]			<0.001**
Country of birth Q4			
Canada	628	1528	41.1
Other	128	263	48.7
Total	756	1791	42.2
P value[c]			0.022*
Residence Q5			
Central Ontario	33	111	29.7
Eastern Ontario	28	112	25.0
Greater Toronto	431	842	51.2
Northern Ontario	27	105	25.7
Ottawa and area	97	221	43.9
Southwestern Ontario	140	400	35.0
Total	756	1791	42.2
P value[c]			<0.001**
First language Q6			
English only	631	1511	41.8
French (and not other)	57	126	45.2
Other	68	154	44.2
Total	756	1791	42.2
P value[c]			0.66
Ethnic/cultural status Q7			
European (British, Eastern, Northern, Southern)	476	1137	41.9
French (includes French first language)	106	256	41.4
Aboriginal	46	97	47.4
Asian (East, Southeast, South)	57	114	50.0
Other	42	104	40.4
Unknown or unclassified	29	83	34.9
Total	756	1791	42.2
P value[c]			0.308

Table II. *Continued*

	Stigma web surveys (n = 1791) Frequency aware	Total in category	Percent of category aware
Education Q8			
Some high school or high school graduate	108	365	29.6
1–2 years college or university	229	581	39.4
3 or 4 year degree	216	443	48.8
Postgraduate or professional degree	203	402	50.5
Total	756	1791	42.2
P value[c]			<0.001**
Household income Q9			
$0 to < $50 000	266	627	42.4
$50 000 to < $100 000	277	642	43.2
$100 000 or more	154	346	44.5
Refused	59	176	33.5
Total	756	1791	42.2
P value[c]			0.092
HIV status Q10			
HIV positive	99	146	67.8
HIV negative	572	1367	41.8
Unknown[d]	85	278	30.6
Total	756	1791	42.2
P value[c]			<0.001**
Sexual risk			
UAI with a casual male partner of unknown or different status	182	382	47.6
UAI with a casual male partner of the same status	136	292	46.6
No UAI	438	1117	39.2
Total	756	1791	42.2
P value[c]			0.004**

[a]This table reports findings for the Stigma survey Q23 'Have you seen the HIV Stigma gay men's campaign (sample picture provided)?.' [b]'Other' includes 'two spirited' and 'other (please specify)' [c]*P* value of chi-squared test of homogeneity (independence of proportions). *Significant at the 0.05 level; **significant at the 0.01 level. [d]'Unknown' includes 'haven't tested or don't know' and 'refused.'

showed no significant difference in the effect of the campaign on men differentiated by serostatus (not shown).

Conclusions

Stigma is a concept that can refer to a wide range of historically shifting practices, attitudes and difficulties. Among the mix of elements entering into public images of people with HIV in contemporary Canadian society are press coverage of criminal prosecutions for HIV transmission, popular discourses distinguishing 'innocent victims' from other people living with HIV, public health messaging and the work of AIDS service organizations. In this environment, HIV-negative gay and bisexual men may face dilemmas of how to separate rejection of the virus from rejection of men who have the virus. HIV-positive men face dilemmas of how to find intimacy and sex when potential partners may be fearful or rejecting. HIV-positive men articulated these kinds of dilemmas as central to their experience of HIV stigma through the lengthy process that generated the hivstigma.com campaign.

The HIV stigma campaign intervention succeeded in increasing awareness of HIV stigma

Table III. *Survey outcome frequencies and percentages by time and intervention awareness and analysis of intervention effect on survey outcomes controlling for time, HIV status, sexual identity, age group, place of residence, education level and sexual risk using logistic regressions (n = 3733)*

Survey outcomes	Pre-test (n = 1942)	Post-test (n = 1791)		Intervention effect		Time effect	
	Unaware (n = 1942), frequency (%)	Unaware (n = 1035), frequency (%)	Aware (n = 756), frequency (%)	OR of agreeing (99% CI)	P value	OR (99% CI)	P value
I think that gay men with HIV are likely to disclose their HIV status to their sexual partners	652 (33.6)	284 (27.4)	198 (26.2)	0.98 (0.73, 1.31)	0.871	0.75 (0.60, 0.94)	0.001
I think gay men with HIV are reluctant to disclose their HIV status to their sexual partners because they do not want to be rejected	1268 (65.3)	636 (61.4)	553 (73.1)	1.48 (1.12, 1.96)	<0.001	0.88 (0.71, 1.08)	0.105
If a gay man has HIV, there is no excuse for him not to talk about his HIV status before having sex with a new partner	1617 (83.3)	877 (84.7)	555 (73.4)	0.63 (0.45, 0.87)	<0.001	1.06 (0.80, 1.41)	0.591
I think gay men with HIV face stigma and discrimination within the gay community	1362 (70.1)	665 (64.3)	613 (81.1)	1.82 (1.34, 2.47)	<0.001	0.85 (0.69, 1.06)	0.065
I use terms like 'clean' or 'disease-free' when I cruise for sex on-line … Always, usually or sometimes (versus never) (this question was applicable for 1824 pre-test, 977 post-test unaware and 690 post-test aware respondents)	1472 (80.7)	814 (83.3)	460 (66.7)	0.64 (0.46, 0.91)	<0.001	0.99 (0.74, 1.34)	0.955
I seek sex partners with the same HIV status as mine as a way to prevent HIV transmission.	1485 (76.5)	820 (79.2)	523 (69.2)	0.67 (0.50, 0.91)	<0.001	1.17 (0.91, 1.50)	0.106
I have no problem having sex with men with HIV as long as we have safe sex. (this question was applicable for 1819 pre-test, 988 post-test unaware and 690 post-test aware respondents)	561 (30.8)	283 (28.6)	272 (41.4)	1.39 (1.03, 1.87)	0.004	1.03 (0.81, 1.31)	0.728

among gay and bisexual men in Ontario and attracted considerable participation in a web-based forum on the ways in which stigma affects the lives of HIV-positive men and on the role that stigma may play in creating situations of vulnerability to HIV transmission. Grounded on an extensive period of community discussion among a wide range of stakeholders, the awareness campaign and web forum invited gay, bisexual and other men who have sex with men to bring their concerns and anxieties about HIV and stigma to the table, providing a collective space in which to work through perceptions and (mis)understandings related to HIV risk management in everyday lives. The extensive set of postings, and the more than 4000 web visitors who returned more than 10 times to the site, indicate that the site struck a chord with many community members and stimulated dialogues that likely spilled over into other contexts of daily life. The large sample of men drawn

from a popular gay contact site showed that those who were aware of the campaign were significantly more aware of stigma and its role in HIV transmission at the conclusion of the intervention compared with pre-test respondents and unaware post-test respondents.

Community-level interventions of this type, nevertheless, present important challenges for evaluation. While they attempt to delve into the underlying social determinants of HIV transmission, they do no lend themselves easily to the demonstration of clear behavioral change, whether direct or indirect. Whereas the clinical model, common in intervention research, follows a controlled set of participants over time to measure efficacy and is then left with the problem of bridging from clinical efficacy to community effectiveness, the community intervention goes directly to its intended audience but cannot 'control,' or even know definitively, the boundaries of 'community.' In this intervention, then, measuring the reach of the campaign and the degree of awareness among community members was an essential part of the evaluation as exposure to it was sure to be uneven. Community interventions are, as well, expensive and organizationally complex investments whose long-term effects are not easily determined. Their potential is in their engagement with many different sectors of a community differentiated by region, age, social class, serostatus and ethnocultural background and in the possibility of impacting popular discourses circulating among social networks that influence everyday risk decision making.

Funding

AIDS Bureau of the Ontario Ministry of Health and Long-Term Care.

Acknowledgements

The success of the HIV stigma campaign was made possible through the work of the Gay Men's Sexual Health Alliance and its individual and agency partners. These include the eight campaign bloggers (Bob Leahy, Gaston Cotnoir, Murray Jose, Brian Finch, David Lewis-Peart, Nik Redman, Tim McCaskell and Vijay Saravanamuthu); members of the Campaign Working Group, Poz Prevention Working Group and Provincial Advisory Body (Paul McCarty-Johnston, Art Zoccole, Rob MacKay, Daniel Le, Mark Lucas, José Cedano, Maxxine Rattner, Barry Adam, John Maxwell, Mikiki, Christiane Bouchard, Ayden Scheim, David Lewis-Peart, Vijay Saravanamuthu, Bruce Clarke, Owen McEwen, Murray Jose, Rick Kennedy, Keith Wong, Zavaré Tengra, Mooky Cherian, Peter Richtig, Bob Leahy, Carlos Rivas, Shannon Ryan and Rahim Thawer); Top Drawer Creative Inc. (especially Brian Gahan, Frank Aloise, Michelle Devan, Rachel Muir and Matthew Kyte); the campaign evaluation consultants (S.R. and V.R.); GMSH staff housed at the Ontario AIDS Network (J.O. and S.G.L.) and the AIDS Bureau at the Ontario Ministry of Health and Long-Term Care (Frank McGee, J.M. and Chris Lau).

Conflict of interest statement

None declared.

References

1. Ross S, Rynard V. GMSH Campaign Evaluation Working Group. *Gay Men's Sexual Health Alliance (GMSH) HIV Stigma Campaign Final Evaluation Report*. Hamilton, Ontario: Health Policy Strategies, 2010, 26.
2. Adam BD. Mobilizing around AIDS. In: Levine M, Nardi P, Gagnon J (eds). *In Changing Times*. Chicago: University of Chicago Press, 1997, 23–38.
3. Crimp D. *AIDS: Cultural Analysis, Cultural Activism*. Cambridge: MIT Press, 1988.
4. Patton C. *Inventing AIDS*. New York: Routledge, 1990.
5. Patton C. *Fatal Advice*. Durham, NC: Duke University Press, 1996.
6. Rofes E. *Reviving the Tribe*. Binghamton, NY: Harrington Park Press, 1996.
7. Stockdill B. *Activism Against AIDS*. Boulder, CO: Lynne Rienner, 2003.
8. Abraham C, Michie S. A taxonomy of behavior change techniques used in interventions. *Health Psychol* 2008; **27**: 379–87.
9. Bos A, Schaalma H, Pryor J. Reducing AIDS-related stigma in developing countries. *Psychol Health Med* 2008; **13**: 450–60.

10. Parker R, Aggleton P. HIV and AIDS-related stigma and discrimination. *Soc Sci Med* 2003; **57**: 13–24.
11. Stutterheim S, Pryor J, Bos A *et al*. HIV-related stigma and psychological distress. *AIDS* 2009; **23**: 2353–7.
12. Beck A, McNally I, Petrak J. Psychosocial aspects of HIV/STI risk behaviours in a sample of homosexual men. *Sex Transm Infect* 2002; **79**: 142–6.
13. Adam BD, Husbands W, Murray J *et al*. Circuits, networks, and HIV risk management. *AIDS Educ Prev* 2008; **20**: 420–35.
14. Adam BD. Constructing the neoliberal sexual actor. *Cult Health Sex* 2005; **7**: 333–46.
15. Berg R. Barebacking. *Arch Sex Behav* 2009; **38**: 754–64.
16. Gorbach P, Galea J, Amani B *et al*. Don't ask, don't tell. *Sex Transm Infect* 2004; **80**: 512–7.
17. Larkins S, Reback C, Shoptaw S *et al*. Methamphetamine-dependent gay men's disclosure of their HIV status to sexual partners. *AIDS Care* 2005; **17**: 521–32.
18. O'Leary A. Guessing games. In: Halkitis P, Gómez C, Wolitski R (eds). *HIV+Sex*. Washington, DC: American Psychological Association, 2005, 121–32.
19. Reback C, Larkins S, Shoptaw S. Changes in the meaning of sexual risk behaviors among gay and bisexual male methamphetamine abusers before and after drug treatment. *AIDS Behav* 2004; **8**: 87–98.
20. Rhodes T, Cusick L. Accounting for unprotected sex. *Soc Sci Med* 2002; **55**: 211–26.
21. Richters J, Hendry O, Kippax S. When safe sex isn't safe. *Cult Health Sex* 2003; **5**: 37–52.
22. Semple S, Patterson T, Grant I. Partner type and sexual risk behavior among HIV positive gay and bisexual men. *AIDS Educ Prev* 2000; **12**: 340–56.
23. Semple S, Patterson T, Grant I. Psychosocial predictors of unprotected anal intercourse in a sample of HIV positive gay men who volunteer for a sexual risk reduction intervention. *AIDS Educ Prev* 2000; **12**: 416–30.
24. Smith A, Grierson J, Wain D *et al*. Associations between the sexual behaviour of men who have sex with men and the structure and composition of their social networks. *Sex Transm Infect* 2004; **80**: 455–8.
25. Stirratt M. I have something to tell you. In: Halkitis P, Gómez C, Wolitski R (eds). *HIV+Sex*. Washington, DC: American Psychological Association, 2005, 101–19.
26. Van Kesteren N, Hospers H, Kok G *et al*. Sexuality and sexual risk behavior in HIV-positive men who have sex with men. *Qual Health Res* 2005; **15**: 145–68.
27. Wolitski R, Bailey C. It takes two to tango. In: Halkitis P, Gómez C, Wolitski R (eds). *HIV+Sex*. Washington, DC: American Psychological Association, 2005, 147–62.
28. Adam BD, Elliott R, Husbands W *et al*. Effects of the criminalization of HIV transmission in Cuerrier on men reporting unprotected sex with men. *Can J Law Soc* 2008; **23**: 137–53.
29. Blais M. Vulnerability to HIV among regular male partners and the social coding of intimacy in modern societies. *Cult Health Sex* 2006; **8**: 31–44.
30. Courtenay-Quirk C, Wolitski R, Parsons J *et al*. Is HIV/AIDS stigma dividing the gay community? *AIDS Educ Prev* 2006; **18**: 56–67.
31. Dodds C, Keogh P, Chime O *et al*. *Outsider Status*. London: Sigma Research, 2004, 74.
32. Dowshen N, Binns H, Garofalo R. Experiences of HIV-related stigma among young men who have sex with men. *AIDS Patient Care STDS* 2009; **23**: 371–6.
33. Remis R, Swantee C, Liu J. *Report of HIV/AIDS in Ontario 2007*. Toronto, Canada: Ontario HIV Epidemiologic Monitoring Unit, 2009, 196.
34. Gold R, Skinner M, Ross M. Unprotected anal intercourse in HIV-infected and non-HIV-infected gay men. *J Sex Res* 1994; **31**: 59–77.
35. Kalichman S, Cherry C, Cain D *et al*. Psychosocial and behavioral correlates of seeking sex partners on the internet among HIV-positive men. *Ann Behav Med* 2005; **30**: 243–50.
36. Martin J, Knox J. Loneliness and sexual risk behavior in gay men. *Psychol Rep* 1997; **81**: 815–25.
37. Myers H, Javanbakht M, Martinez M *et al*. Psychosocial predictors of risky sexual behaviors in African American men. *AIDS Educ Prev* 2003. 2003; 15(Suppl. A): 66–79.
38. Wolitski R, Parsons J, Gómez C *et al*. Prevention with HIV-seropositive men who have sex with men. *J Acquir Immune Defic Syndr* 2004; **37**: S101.