



West Virginia Lesbian, Gay, and Bisexual Tobacco Survey

Final Report
August 11, 2010

Prepared for:
West Virginia Covenant House



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This study was funded by Covenant House, through a grant from the West Virginia Division of Tobacco Prevention.

The opinions expressed are those of the authors and not of the funding agency.

Research Ethics Reviewed: UNC Biomedical Institutional Review Board (#10-0200)

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I. Executive Summary

West Virginia (WV) is home to approximately 37,600 lesbian, gay, and bisexual (LGB) men and women.¹ When sexual orientation is included in surveys nationally and in other states, researchers have documented a higher risk of smoking among LGB individuals.^{2,3} Currently, the public health surveillance system in WV does not capture data on sexual orientation. Therefore, no data on LGB smoking prevalence is available in WV to assess tobacco use in this population.

This report provides an independent assessment of evidence for a LGB tobacco disparity in WV. This is one of the first and most comprehensive studies of LGB tobacco use in Appalachia. To identify rates of tobacco use for LGB West Virginians, the UNC Tobacco Prevention and Evaluation Program conducted two pilot surveys of tobacco use in LGB populations at bars and community events. Key findings include:

Current Tobacco Use

- 45% of survey participants reported using one or more tobacco product.
- 41% of survey participants reported being a current smoker.
- 11% of survey participants reported smoking cigars.
- 4% of survey participants reported using smokeless tobacco.
- More LGB people surveyed in bars (51%) compared to community events (38%) smoke.

Dual Use of Tobacco Products

- 80% of cigar smokers reported smoking cigarettes.
- 60% of smokeless tobacco users reported smoking cigarettes.

Smokers' Interest in Quitting

- 44% of LGB smokers had attempted to quit once or more in the last year.
- 57% felt that an LGB-friendly quit program would increase their confidence in being able to quit.
- LGB smokers interested in quitting selected Facebook (56%) and friends (14%) as the primary ways they would like to find out about LGB-friendly quit programs.
- A moderately high percentage of smokers in a Charleston bar had seen LGB-specific cessation public service announcements (42%).

This pilot study documents that LGB West Virginians are at elevated risk of tobacco use. The smoking prevalence in our pilot sample is substantially higher than the 27% smoking rate in WV's general population. Quit attempts (44%) appear less than the statewide population estimate (54%). Interventions addressing tobacco use and cessation among the LGB population in WV are warranted. Future research should examine utilization of bars and LGB community events as key places for intervention.

Recommendations

1. Continued cessation resources and media outreach for LGB populations, with particular emphasis on LGB community members who patronize bars, are warranted given the prevalence of tobacco use identified in LGB bars and community events.
2. Future interventions and research should examine dual use of tobacco products, particularly among smokeless tobacco and cigar users.
3. To fully quantify the disparity, population-based random sampling is needed. The survey team recommends that WV Department of Health & Human Services add a sexual orientation question to the WV Behavioral Risk Factor Surveillance System (BRFSS).

II. Background

Advocates and researchers provided early evidence of a disparity in smoking for gays and lesbians in Kentucky's late-1980s Trilogy Project.⁴ As more states and some national studies have added a demographic question on sexual orientation, the evidence for a gay, lesbian, and bisexual (LGB) disparity in tobacco use has grown stronger. This is due, in part, to evidence from Behavioral Risk Factor Surveillance System (BRFSS) surveys which have included a sexual orientation question in Massachusetts,⁵ Washington,⁶ New Mexico, and 10 other states.⁷ Other evidence comes from California, which funded a large, one-time study.² Researchers have also done random household probability sampling in individual cities, including a suburb of Boston,⁸ Tucson/Portland,⁹ and four other large cities.¹⁰ Such statewide surveys and randomly sampled studies have generally found significant tobacco-use disparities between LGB individuals and straight individuals.^{3, 11, 12} Previous studies have found the odds of smoking for LGB men and women generally range from 1.5 to 2.5 times those of straight populations.³

However, most research and work on LGB populations has occurred in California, New England, the Pacific Northwest, and a few large metropolitan cities. Little is known about regional or local disparities, thus hindering intervention and policy development. Virtually no data is available from states in the South or Appalachia, and a recent systematic review identified no published studies in West Virginia examining tobacco use among LGB populations.³

As estimates derived from the American Community Survey and National Survey on Family Growth suggest that over 37,600 LGB individuals live in West Virginia,¹ Covenant House approached the Tobacco Prevention and Evaluation Program at the University of North Carolina at Chapel Hill to develop and implement a pilot survey to: 1) identify if sufficient evidence exists of a disparity in LGB tobacco use in WV, 2) examine interest in quitting among LGB West Virginians who use tobacco, and 3) gauge awareness of existing media outreach to LGB West Virginians run by WV Covenant House. Covenant House is a Charleston-based social services agency providing diverse services from a food pantry, to youth groups, to AIDS care.

The University of North Carolina (UNC) Tobacco Prevention and Evaluation Program (TPEP) provides expertise in formative and summative evaluation for a broad range of public health initiatives. Housed in the UNC Department of Family Medicine, TPEP works in a distinctive environment that allows access to experts in multiple clinical and academic fields. TPEP provides independent evaluation of the North Carolina Health and Wellness Trust Fund Tobacco Initiatives and has worked nationally and with state partners, including in Louisiana, New Mexico, and West Virginia. TPEP has extensive experience with survey design and implementation and has utilized mixed methods, including focus groups, long interview techniques and survey methodology. Multiple TPEP surveys have examined NC attitudes toward tobacco use, use and intentions to use tobacco, and awareness of media campaign components. TPEP staff have had peer-reviewed papers on LGB tobacco use accepted to the *American Journal of Public Health*, *Nicotine & Tobacco Research*, and *Tobacco Control*. Published articles and TPEP's reports are available at www.tpep.unc.edu.

III. Methods

Given the resources available for this research, random sampling of LGB populations across WV was not feasible. The research team thus chose to use community and venue-based sampling, specifically LGB bars and clubs and the West Virginia Pride Parade and Festival. A venue-based approach is an acceptable alternative that is frequently used when resources for population-based sampling are not available.

Venue-Selection

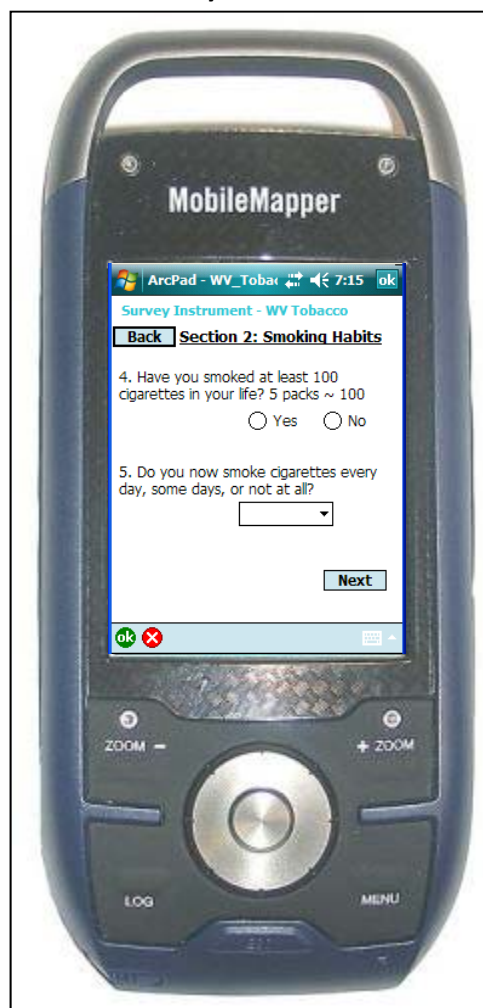
To reach a diverse portion of the LGB community, TPEP chose to survey bars and community events affiliated with the WV Pride Festival and Parade. Multiple key-informants identified bars and clubs frequented by the LGB community. The survey team selected six bars in three cities for their regional diversity and clientele. All six gave permission for the survey team to conduct surveys. Volunteer surveyors collected surveys between 10 p.m. and 1 a.m., typically before any performances began, using handheld electronic survey devices (Figure 1). Additionally, staff of the WV Pride Festival and Parade gave permission for surveying at community events, including a volleyball tournament, movie night, and the Pride Parade. Surveyors at community events used a paper questionnaire. The UNC Biomedical Institutional Review Board reviewed the research protocol and survey instrument (#10-0200).

Survey Instrument

The research team developed a 16 question survey (Appendix 2), using standard BRFSS questions for tobacco use and quit attempts. We modified the standard BRFSS age and education questions to have closed response options to facilitate data entry. The research team measured smoking intensity with the question: “On average how many cigarettes do you smoke a day? [Choice set: None, Less than one-half pack, One-half pack, One pack, One and a half packs, Two packs or more]”. The research team ascertained sexual orientation with: “What best describes your sexual orientation? [Choice set: Bisexual, Gay, Lesbian, Straight]”. The survey instrument screened out non-WV residents and youth under age 18. Electronic surveys employed a skip pattern to eliminate tobacco use intensity and quitting questions for nonusers. The survey asked tobacco users three questions about services: interest in an LGB-specific quit program, knowledge of Covenant House’s public service announcement (“In the past six months, have you seen a television ad about inviting bad things into your home and choosing to quit smoking?” [the PSA is available from: <http://www.wvcovenanthouse.org/health-action-1>]), and preferred communication channel to receive information on quitting.

Staff programmed surveys into ArcPad (version 8, ESRI Software, Redlands, California) and collected using handheld Magellan Mobile Mapper 6 units. Depending on noise level and respondent comfort, respondents directly entered data

Figure 1: Mobile Mapper 6 unit and survey screen



into the device or the surveyor read questions and entered responses. The survey screened out respondents who did not live in or attend school in WV and those under age 18 in the first questions.

Survey Implementation

The research team trained community surveyors on approach, confidentiality, and the avoidance of sampling bias. Surveyors recorded the number of declines in electronic surveys. The surveyor offered each participant a small incentive (rainbow lollipop or organic teabag) and a post-card sized information sheet with a statement about the study, consent information, rights, study contact information, and the eventual web location of the final report. On the other side, the card listed WV Tobacco QuitLine and Covenant House resources. Surveyors collected data during May – June, 2010.

To determine the refusal rate for the survey, the team electronically documented refusals during the bar survey. To do this the survey team implemented a simple protocol: the first question on consent to participate was answered no by the surveyor when potential respondents declined to participate. Because the paper survey allowed for surveyors to administer the survey to multiple people at once and because the team was concerned about efficiency to gain a higher number of respondents, the paper survey did not collect the number of refusals.

Analysis

The survey team downloaded data from survey units and into SPSS 17 (IBM, Chicago, Illinois) and entered paper surveys into Excel then recoded them to match electronic surveys in SPSS. Staff independently double checked 20% of paper surveys for data entry errors. The survey team *a priori* hypothesized that bar surveys would show higher rates of tobacco use and thus that whenever possible the team would stratify data by bar or community event survey. The team felt that we would see few self-identified straight respondents and given that straight people in LGB bars may not be representative of straight people in general, we do not to compare tobacco prevalence between straight and LGB respondents.

IV. Results

Survey participation

The survey team collected 604 surveys in diverse venues across WV. Surveyors worked in six bars and community events as diverse as a dog show and pride parade, volleyball tournament, movie nights, and picnics. In the bar sample, 12% of those approached declined to participate. Surveyors collected 71% of surveys at festival events and 29% at bars. After excluding non-eligible respondents (straight, under age, and/or residing outside of WV), the team analyzed results from 386 surveys.

Table 1: Survey participation

Survey Locations	n
Electronic surveys (including refusals)	
Bar, Charleston	57
Bars, Huntington (x3)	86
Bars, Morgantown (x2)	77
Paper Surveys	
WV Pride Festival	159
Power of One Awards Dinner	6
Huntington Pride Picnic	46
Pride Wine Tasting	15
Mr./Ms. Pride Competition	80
Bear Contest	19
Young adult Monte Carlo night	7
Pride film night	6
Pride volleyball	15
Pride Social	31
Total collected	604
Refusals (documented for electronic mode only)	-26
Under age 18	-3
Reside outside WV	-44
Unusable (missing data)	-7
Self-reported straight	-138
Total usable surveys	386

Survey demographics

Sixty-nine percent of survey participants were male, with relatively similar proportions reported in both the electronic and paper surveys (Table 2). Respondents were young: 62% reported being under age 40 and only 2% reported being 60 or older (Table 3). Additionally, respondents reported having completed high school or 2- or 4-year college: only between 4% and 18% reported completing graduate school.

Table 2: Gender of participants by survey mode

	Female	Male
Electronic (bars)	28%	72%
Paper (festival)	32%	68%
TOTAL	31%	69%

Note: May not add to 100% due to rounding.

Table 3: Demographic characteristics of survey sample by sexual orientation

	Sexual Orientation				
	Lesbian (n=89)	Gay (n=245)	Bisexual Woman (n=28)	Bisexual Man (n=24)	Total (n=386)
Age					
18-24	20%	20%	32%	21%	21%
25-29	16%	14%	29%	8%	15%
30-34	18%	14%	7%	17%	15%
35-39	8%	11%	14%	21%	11%
40-44	8%	14%	7%	13%	12%
45-49	12%	11%	7%	13%	11%
50-54	12%	8%	-	4%	8%
55-59	6%	5%	4%	4%	5%
60+	-	3%	-	-	2%
Highest Education					
Some high school	2%	2%	-	-	2%
High school	32%	24%	29%	33%	27%
2 year college	35%	25%	25%	29%	27%
4 year college	19%	33%	29%	33%	30%
Graduate school	12%	16%	18%	4%	14%
Survey Mode					
Electronic (bars)	15%	26%	54%	46%	27%
Paper (festival)	85%	74%	46%	54%	73%

Tobacco use and quit attempts

Tobacco use among respondents in the convenience sample was high, indicating that LGB individuals who patronize LGB bars or attend Pride Festival events are at substantial risk of tobacco-related disease. Among LGB respondents, 41% reported current smoking, 4% current smokeless tobacco use, and 11% current cigar use (Table 4). While not directly comparable to statewide health data due to differences in sampling, this data shows a high level of tobacco use in community events and bars surveyed. As hypothesized, tobacco use among bar patrons tended to be substantially higher than among participants in the community events. The LGB bar surveys reported higher rates of cigarettes use, smokeless tobacco use, and cigar use. Current smokers in the bar sample were just as likely as those in the festival sample (46% versus 43%) to report quit attempts in the last year.

Table 4: LGB tobacco use and quit attempts by sexual orientation among WV LGB respondents

	LGB, bar sample (n=103)	LGB, festival sample (n=283)	LGB, overall (n=386)	WV General Population ¹³
Current tobacco user	57%	40%	45%	35% (2008 BRFSS) ¹⁴
Current smoker	51%	38%	41%	27% (2008 BRFSS)
Current smokeless tobacco user	8%	2%	4%	6% (2006-2007 TUS-CPS)
Current cigar smoker	21%	7%	11%	3% (2006-2007 TUS-CPS)
Quit attempts in last year (current smokers)	46%	43%	44%	54% (2008 BRFSS)

Lesbian, gay, and bisexual respondents each reported higher use of tobacco than the WV general population: 46% of lesbian women and 38% of gay men reported current smoking. The state rate for WV is 27% for women and 26% for men (Table 5). Respondents reported high levels of cigar use with between 9% and 27% of LGB respondents using cigars.

Table 5: Tobacco use behaviors and quit attempts

	Sexual Orientation				WV General Population ¹³	
	Lesbian (n=89)	Gay (n=245)	Bisexual Woman (n=28)	Bisexual Man (n=24)	Women	Men
Current smoker	46%	38%	48%	46%	27% (2008 BRFSS)	26% (2008 BRFSS)
Current Cigar Use	12%	9%	27%	13%	0.5% (2006-2007 TUS-CPS)	5.0 (2006-2007 TUS-CPS)
Smokeless Tobacco Use	3%	3%	4%	17%	0.3% (2006-2007 TUS-CPS)	12% (2006-2007 TUS-CPS)
Quit attempts in last year (current smokers)	33%	52%	42%	27%	55% (2008 BRFSS)	54% (2008 BRFSS)

The TUS-CPS = Tobacco Use Supplement to the Current Population Survey.

Dual use

LGB cigar smokers and smokeless tobacco users frequently also report cigarette smoking, with between 60% and 80% reporting such dual use. About half (47%) of smokeless tobacco users reported also smoking cigars (Table 6).

Table 6: Dual use of tobacco products among WV LGB tobacco users

	% using cigarettes	% using cigars	% using smokeless
Cigarette smokers	-	22%	6%
Cigar smokers	80%	-	16%
Smokeless users	60%	47%	-

Note: cigar smokers and smokeless users are defined as using "some days" or "every day."

Quit program preferences

Among LGB tobacco users interested in quitting, 57% reported that a quit program for LGB people would make them feel more confident about quitting. An additional 23% reported that they did not care, and 20% said that such a program would not increase their confidence.

Using a multiple-choice question, we asked how respondents would like to find LGBT-friendly programs to help quitting. The majority of LGB tobacco users interested in quitting suggested Facebook (56%) followed by friends (14%) and WV Pride Web Site (11%).

Table 7: Preferred media to find out about LGB quit programs

	% (n=112)
Facebook	56%
Friends	14%
WV Pride Web Site	11%
Posters at bars and clubs	8%
WV Queer News Web Site	4%
Other responses included group settings specific to smoking, magazines, and MySpace	7%

Awareness of public service announcement media campaign

Covenant House aired a WV Tobacco QuitLine promotional public service announcement (PSA) directed at LGB audiences. Forty-two percent of current smokers surveyed in a Charleston bar reported having seen the PSA. We do not report results from other venues as the survey instrument did not verify that respondents lived in an area where Covenant House aired the PSA.

V. Discussion

This pilot survey found evidence of high rates of tobacco use among lesbian, gay, and bisexual West Virginians. The findings of this survey suggest that LGB living in WV may face similar risk of elevated tobacco use as found in rigorously sampled surveys in other states.^{15, 16} Previous studies have found the odds of smoking for LGB men and women generally range from 1.5 to 2.5 times those of straight populations.³

Why a disparity in tobacco use exists among LGB people remains unclear. However, researchers have identified several explanations. The tobacco industry has clearly targeted LGB individuals with marketing.¹⁷ Stress and discrimination may be a pathway to increased susceptibility to tobacco use.¹⁸ For example, LGB youth in focus groups suggest smoking can make them look tough to protect against harassment.¹⁹ LGB individuals may be less likely to quit due to reduced access to health care.²⁰ Additionally, bars have long been central LGB community spaces, serving as social hubs and as the nexus of the LGBT rights movements in the 1960s.²¹ Interviews with bar clients indicate that bars serve as a place to feel accepted.²² Bars are also places where smoking has been allowed historically. Such consistent exposure to smoking in community spaces may contribute to the disparity.

Where and how to intervene against tobacco in LGB communities remains a challenge. Certainly facilitating the diffusion of information on services through social networks via LGB opinion leaders could be a key strategy. WV Covenant House currently employs such strategies with apparent success. Bars, in particular, may be a location where targeted intervention could reach populations at high risk of tobacco use. Bar-based interventions for HIV and sexually transmitted infections using peer-to-peer and opinion leader strategies show changes in risk behavior.²³ Little is known about bar-based efforts to address tobacco. Formative research is essential to design strong interventions in these settings.

The survey analysis shows a substantial overlap of multiple tobacco products among cigar smokers and smokeless tobacco users. The survey team's findings of high levels of dual use (60%-80% of cigar and smokeless users also report smoking cigarettes) suggests that current and future interventions could place additional emphasis on addressing dual use. Such work would be strengthened with formative research and, if implemented, evaluation.

This survey has a number of limitations including the use of a convenience sample. As a convenience sample, this data is not generalizable to the population of LGB West Virginians who were not surveyed; nor is it directly comparable to WV's general population. As such, we *a priori* decided not to compare with WV statewide data on tobacco use among the general population. However, we do provide such data, when appropriate, as a reference point. The results may not be generalizable to LGB individuals who do not patronize bars and/or the community events. Survey respondents reported being young; as such, this survey does not reflect tobacco use behaviors of older LGB individuals. However, this large sample from a diverse array of community events and bars does provide evidence that there is likely a substantial disparity in smoking and cigar use among LGB West Virginians. The evidence is even more compelling when viewed in the context of national research that shows a significant disparity exists across time, place, and study design.³

While this pilot convenience sample provides some of the first evidence on tobacco use among LGB West Virginians, it also illustrates a clear identifiable need for a sexual orientation question in statewide public health surveillance surveys such as the WV BRFSS with its rigorous population sampling. The lack of quality data has long hindered LGB health promotion,²⁰ and the importance of such questions in health surveillance is well documented.^{24, 25} At least 13 other states have collected sexual orientation in the BRFSS,⁷ often pooling multiple years of data to identify health disparities and design programs.⁶

Acknowledgement

We thank David Bennett, Jeff Crist, R. Kevin Dunlap, Kam Farsheed, Emilie G. Marlier, Paul Milam, and Clark Sheldon for help with data collection. Thanks to Ashlea Carver and Katherine Leibel for help with the data and to Matt Simon of the North Carolina Institute of Public Health for assistance with the handheld survey units.

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Appendix 2: Paper survey



THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

West Virginia Covenant House Lesbian, Gay, and Bisexual Tobacco Survey

You are invited to participate in a short survey about tobacco use in the West Virginia lesbian, gay, and bisexual community.

Taking the survey is up to you. Participation is voluntary. The survey is anonymous.

The survey should take you five minutes or less. You can stop answering questions at any time or skip any questions you do not want to answer.

This survey will help us learn new information about tobacco use in the community and may help people in the future. You will receive a small gift of a tea bag or lollipop, but you may not receive any other benefit from being in the survey. This survey has no or little risk (people nearby might see you answering and identify you as gay or lesbian).

About this survey:

Title of Study: West Virginia Lesbian, Gay, and Bisexual Tobacco Survey

Principal Investigator: Adam O. Goldstein

UNC-Chapel Hill Department: Family Medicine

Funding Source: West Virginia Covenant House, Charleston, WV

Study Contact: Joseph Lee

Study Contact telephone number: 919-966-8948

Study Contact email: jose.lee@unc.edu

IRB # 10-0200

We will combine answers in a report so no one can identify your responses.

1. Which of the following best applies to you? (Mark one answer: ☒)

I live in West Virginia

I currently live in West Virginia because I go to a West Virginia school

I do not live in West Virginia

Stop! You're not eligible for this survey.

2. What is your age? (Mark one answer: ☒)

Under 18

18-24

25-29

30-34

35-39

40-44

45-49

50-54

55-59

60+

Prefer not to answer (18+)

Stop! You're not eligible for this survey.

3. What best describes your gender? (Mark one answer: ☒)

Female

Male

Other

4. Do you identify as transgender? (Mark one answer: ☒)

Yes

No

I don't know

5. What best describes your sexual orientation? (Mark one answer: ☒)

Bisexual

Gay

Lesbian

Straight

Continue to next page

6. What is the highest grade or year of school you completed? (Mark one answer:)

- Some high school
- High school
- 2 year college
- 4 year college
- Graduate school

7. Have you smoked at least 100 cigarettes in your entire life? Note: 5 packs = about 100 cigarettes.
(Mark one answer:)

- Yes
- No

8. Do you now smoke cigarettes every day, some days, or not at all? (Mark one answer:)

- Every day
- Some days
- Not at all

9. Do you currently smoke cigars every day, some days, or not at all? (Mark one answer:)

- Every day
- Some days
- Not at all

10. Do you currently use chewing tobacco or snuff every day, some days, or not at all?
(Mark one answer:)

- Every day
- Some days
- Not at all

Continue to next page 

11. On average how many cigarettes do you smoke a day? (Mark one answer:)

- None/I don't smoke
- Less than one-half pack
- One-half pack
- One pack
- One and a half packs
- Two packs or more

12. On average how many pouches or cans of chewing or dipping tobacco do you use per week?
(Mark one answer:)

- None/I don't use
- 1-2
- 3-4
- More than 5

13. During the past 12 months, have you stopped using tobacco (cigarettes, chew/dip/snuff, or cigars) for one day or longer because you were trying to quit using tobacco? (Mark one answer:)

- I don't use tobacco
- Yes
- No

14. If you decide to quit, would a program run for gay, lesbian, and bisexual people make you feel more confident about quitting? (Mark one answer:)

- I don't use tobacco
- Yes
- I don't care
- No
- I don't want to quit

Continue to next page 

15. How would you like to find out about LGBT-friendly programs to help you quit?

(Mark one answer:)

- I don't use tobacco
- I don't want to find out about quitting
- Facebook
- WV Queer News web site
- WV Pride web site
- Posters at bar or club
- Yellow pages
- Friends
- Other: _____

