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Sexual Risk Behavior of Men Who have Sex with Men: Comparison of Behavior at Home and at a Gay Resort

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This study compared sexual behavior of gay and bisexual men (N = 551) while at their primary residence to their behavior while vacationing at a gay resort community. Participants reported behavior for the days they spent in the resort and for their last 60 days in their home residences. Overall, 11 times more non-main partners were reported for unprotected anal intercourse (UAI) per day while in the resort as for the "at home" period. Regression analysis identified negative attitudes toward condoms, less concern about AIDS, and daily number of non-main, male partners at home with whom UAI occurred as significant predictors of the daily number of non-main male partners with whom holidaymakers engaged in UAI while in the resort area. The results suggest that sexual risk taking by men who have sex with men (MSM) while on holiday may be elevated over that at home and that prevention efforts need to be promoted in gay resorts. Behavioral surveillance research would be helpful in better characterizing the current social contexts of sexual risk taking by MSM. Theory-based studies of the nature of risk-taking and sexual decision-making on "gay holiday" could inform the development of empirically proven and conceptually grounded interventions.

KEY WORDS: sexual risk; gay men; vacation; unprotected anal intercourse.

INTRODUCTION

Sexually transmitted infections (STIs) are on the rise in men who have sex with men (MSM), as demonstrated by recent increases in gonorrhea (Fox et al., 2001; Rietmeijer, Patnaik, Judson, & Douglas, 2003), primary and secondary syphilis (CDC, 2003), and HIV (primarily in young and minority ethnic subgroups of MSM) (Hogg at al., 2001; Katz et al., 2002; Kellog, McFarland, & Katz, 1999; Valleroy et al., 2000). For example, primary and secondary syphilis in the U. S. increased 12.4% in 2002, an increase attributed to cases that were diagnosed in MSM (CDC, 2003). Parallel increases in unprotected anal intercourse (UAI) between HIV serodiscordant male partners are also being reported in the literature (Chen, Gibson, Weide, & McFarland, 2003; Halkitis, Parsons, & Wilton, 2003; Whittington et al., 2003).

Prevention resources are limited and it may be cost- and time-effective to focus prevention efforts in the riskiest contexts or locales to maximize their potential effectiveness. Environmental and situational contexts can influence the sexual risk that is undertaken by individuals (Binson et al., 2001; Ross & Ferreira-Pinto, 2000). In addition, some evidence suggests that sexual risk behavior while on vacation may be elevated over behavior when at home. For example, the traditional North American "spring break" holiday from school has been identified as a time when college students increase the frequency of both their sexual behavior and casual sexual encounters (Apostolopoulous, Sonmez, & Yu, 2002; Maticka-Tyndale, Herold, & Mewhinney, 1998) and another for young United Kingdom tourists traveling to Ibiza (Bellis, Hughes, Thomson, & Bennet, 2004). A recent population-based study reported high levels of sexual risk taking by MSM who were year-round residents in a gay resort area (Webster et al., 2003), but did not assess behavior of transient vacationers to the area. The

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California Department of Health Services (2003) issued a formal epidemiological "alert" about travel to Palm Springs, a popular gay resort, based on evidence that travel to that destination was implicated in increases in syphilis transmissions between MSM and because Palm Springs was identified as a common denominator in an investigation of a syphilis outbreak in MSM.

The limited information that is available regarding sexual activity during travel (Matteelli & Carosi, 2001) is not completely reliable and is difficult to compare for both heterosexuals and homosexuals owing to methodological variations between the different studies. Most of these studies are based on convenience samples drawn from divergent populations. Divergent measurement across the existing studies makes it difficult to compare the results from one study to another because the measurement of sexual behaviors is quite variable. It is apparent, though, that compared to heterosexuals, gay men report more new partners and a greater percentage of protected sex while on vacation (Tveit, Nilsen, & Nyfors, 1994). In three clinic samples, about 40% of gay men reported new partners on vacation (Clift & Forrest, 1999: 40%; Daniels, Kell, Nelson, & Barton, 1992: 36%; Hawkes, Hart, Bletsoe, Shergold, & Johnson, 1995: 44%; Carter et al., 1997: 42%). By comparison, in a general population survey 5% of heterosexuals reported having a new partner (Gillies & Slack, 1996) and in another study 31% of young men reported a new partner while on vacation (Clift & Forrest, 1999).

Data comparing condom use by heterosexuals and by homosexuals on holidays are limited. In one general population sample, 71% of heterosexuals who were sexually active on holiday reported inconsistent condom use for sexual intercourse, and in another study, 25% of young heterosexuals who were sexually active reported that they used condoms inconsistently while on holiday (Clift & Forrest, 1999). By comparison, Tveit et al. (1994) found that 60% of homosexual men did not report consistent condom use during vacation periods.

This research study was conducted to address the gap in knowledge about sexual behavior while at home in comparison with holiday periods. The present study is the first to compare within-subject sexual behaviors of MSM while at home to their sexual behaviors while on holiday.

METHOD

Participants

Mean age of the 551 participants was 35 (range, 18–70; median = 34). Ninety-one percent were white; 95% had completed at least some college education; 6.5% were bisexual; and 6% reported that they were HIV positive. Forty-two percent reported that they had a current "lover" or main partner relationship. The median number of days spent in the resort area was 9, with a range from 1 to 100 (M = 12.6). A little more than half of the sample (54%) reported that their main residence was inside one of three major metropolitan cities located in the geographic area that was served by the resort. Most of the remainder reported a primary residence in the region served by the resort, but outside these three metropolitan centers.

Procedures

In the winter of 2002, self-identified gay and bisexual men who reported vacationing during the prior "season" in a mostly summer residential community that is well known as a popular destination for gay men in its region of the U.S completed a survey. The survey was administered on an Internet web page ($n = 307$) and using conventional paper-and-pencil surveys ($n = 244$). To recruit men for the Internet survey, a service provider from a community-based organization (CBO) used a standard script to invite men who were "on-line" in gay Internet chat rooms to visit the web site and complete the survey. Self-administered paper surveys were distributed through a lesbian and gay newsletter, during intercepts at gay bars, bookstores, gay-oriented businesses, and at gay male vacation planning parties in three urban centers by the CBO staff and volunteers. No personal identifying information was collected from participants and the confidential nature of the survey was described in an introductory statement attached to the survey. The Internet survey was maintained by using industry standard secure socket layers and data encryption devices with no tracking of electronic identifiers.

Measures

The survey was designed to compare behaviors and beliefs while at home and during the participants' vacations in the gay resort. Because the survey was self-completed on the Internet and in gay social venues where men congregated to socialize, the need for brevity influenced the survey's development. Single item measures and checklist response alternatives were used to promote ease of completion. The survey gathered information about participants' demographic characteristics, attitudes and beliefs (attitudes toward condom use, perceptions of risk), sexual behavior (unprotected and condom-protected intercourse with main and non-main partners), history of

sexually transmitted diseases, and substance use. There were parallel items for each location.

Demographic Variables

Seven items collected demographic information about the participant's age, racial/ethnic identity, education, sexual identity, location and duration of his current primary residence, and number of days spent in the gay resort during the previous season. Age, duration of residence, and number of vacation days spent in the resort that year were interval-level (continuous) measures. All other items in this section of the survey were categorical and participants responded by checking the appropriate box. Education and racial/ethnicity each had five possible responses and sexual identity presented two options: "gay male" or "bisexual male." Location of primary residence was a text item.

Belief and Attitudinal Variables

Ten variables assessed the participants' reasons for not using condoms. These items were categorical yes/no options and each participant endorsed the items that applied to him. Sample items are: "Condoms reduce the pleasure" and "It's too much trouble (to use a condom)." Three additional items assessed the participants' perceptions of risk. One item asked the participant to estimate his risk while on vacation compared to "most other people" in the resort using a 4-point Likert-type scale from 1 = "greater risk" than others to 4 = "no risk at all." A second item asked the participant to compare the risk inherent in his behavior while at home against his behavior while on holiday by checking one of three response options ("more risky," "same risk," and "less risky" on vacation than at home). A third item asked the extent to which fear of AIDS influenced the participants' commitment to safer sex using a similar response format ("more likely," somewhat likely," and "not likely at all," to practice safer sex because of AIDS).

Sexual Behavior at Home and on Vacation

Sexual behavior items collected information about sexual behavior with main and other partners and the number of non-main partners during the past 60 days at home and during the vacation in the gay resort. Parallel items assessed for each location the presence of a main (relationship) partner, anal intercourse with a main partner and with non-main partners ("yes" or "no" categorical responses for each), the number of non-main partners in each location with whom the participant engaged in condom-protected and UAI, percentage of intercourse occasions with main partner that were protected with a condom (using a 5-point Likert scale for each where 1 = 0 and 5 = "76–100%" of the intercourse occasions). An additional set of items assessed where the participant met his non-main sex partners at home (i.e., bar, Internet, park, personal ads, and cruising spots) and where he met the non-main partners while on vacation (i.e., bar, boardwalk, Internet, beach). Participants checked each location that applied in the past 60 days at home and during his most recent vacation at the gay resort.

History of Sexually Transmitted Diseases

Two parallel sets of items assessed whether the participant had acquired an STD during the past 60 days at home or during his vacation. Participants checked any STD that applied (for each location) from a checklist that included syphilis, urethral gonorrhea, oral gonorrhea, rectal gonorrhea, genital or anal warts, anal herpes, penile herpes, hepatitis (A, B, or C), or HIV.

Substance Use

Finally, two parallel checklists asked participants to indicate whether they had used any of eight substances at home in the past 60 days or during their vacation in the gay resort. The checklist was further subdivided into two additional columns for each location and participants were asked to indicate if they had used the substance at all and if they had used it during sex. Specific substances named were alcohol, poppers, heroin, ecstasy, crystal methamphetamine, marijuana, Ketamine, and Viagra.

RESULTS

Statistical analyses were conducted using t-tests for the continuous variables and chi-square tests for categorical variables. Bonferroni corrections were applied to correct for the inflated alpha inherent in computing multiple univariate tests. The statistical value required to be significant for correction was set at $p < .01$.

Comparisons of Sexual Behavior at Home and on Holiday

Most participants reported engaging in anal intercourse: 72% of participants reported engaging in anal

sex with men during days spent on holiday and 84% reported anal sex during the last 60 days at home. Sixty-three percent reported anal intercourse in both locations.

Sexual Behavior with Non-Main Partners

UAI with non-main partners, either at home or on holiday, was reported by 37% ($n = 204$) of the participants. Of these, 27% ($n = 55$) engaged in UAI with non-main partners only at home, 39% ($n = 80$) only on holiday, and 34% ($n = 68$) in both locations. 98% ($n = 66$) of those who did so in both places, had a greater per day number of non-main partners for UAI while on holiday (M = .46, $SD = .75$ than at home (M = .05, $SD = .04$). This difference, while quantitatively small, represents a nine-fold higher number of non-main partners on holiday than at home. A paired within-subjects t-test indicated the difference was statistically significant ($t[65] = 4.66$, $d = -1.16$, $p < .0001$).

As shown in Table I, across all participants the mean daily number of unprotected non-main partners with whom UAI was engaged "on holiday" was .11 and "at home" it was .01. This difference was also statistically significant and indicates that 11 times as much UAI with non-main partners was reported on holiday in comparison with home.

Forty-eight percent of the sample reported engaging in protected anal intercourse with non-main partners in both locations, 60% reported doing so at home, and 56% reported doing so on vacation. As shown in Table I, participants also reported a larger number of non-main partners with whom they had condom-protected anal intercourse while on holiday than at home (home = .03; holiday = .25) and this difference was also significant on a paired within-subjects t-test adjusted with Bonferroni corrections. About 8 times as much protected anal intercourse with non-main partners was reported on holiday than at home.

Behavior with "Lovers" (Main Partners)

With main partners, infrequent or inconsistent condom use during anal sex was the preponderant practice in both locales. A majority (and almost equivalent) percentage who reported having a current primary partner also reported never using condoms with their partners (58% at home and 56% on vacation). Condom use scores with partners was not significantly different at home than on vacation (see Table I).

Table I. Comparison of Home and Holiday Behavior ($n = 551$)

	Home	Holiday	t or χ^2	d
Per day number of non-main partners for UAI				
M	.01	.11	6.00*	.51
SD	.03	.39		
Per day number of non-main partners for condom-protected anal intercourse				
M	.03	.25	11.60*	.98
SD	.04	.46		
Condom use with lovers[a]				
M	2.21	2.35	2.16	
SD	1.7	1.8		
Sex in combination with substance use				
Alcohol (%)	43	52	16.45*	
Ecstasy (%)	6	10	13.59*	
Methamphetamine (%)	6	18	48.19*	
Ketamine (%)	2	6	15.57*	
Poppers (%)	37	31	8.58	
Marijuana (%)	11	11	.00	
Viagra (%)	7	10	5.63	
Substance use				
Alcohol (%)	78	75	2.06	
Ecstacy (%)	10	22	47.08*	
Methamphetamine (%)	6	18	50.29*	
Ketamine (%)	5	09	11.25	
Poppers (%)	13	15	2.24	
Marijuana (%)	15	16	.31	
Partner meeting places				
Gay bars (%)	42	54	25.79*	
Internet (%)	54	13	207.48*	

*$p < .0001$
[a]$n = 169$.

UAI with "Lovers" and with Non-Main Partners

UAI with lovers was not correlated with UAI with non-main partners ($r = .03$). In large part, this was because most (82%) of the men who reported currently being in a relationship did not report UAI with non-main partners. For those reporting a main partner and UAI with non-main partners, there was a weak, inverse relationship between UAI with outside partners and with main partners.

Partner Meeting Places

As shown in Table I, significantly more men reported cruising bars for sex partners while on holiday (54%) than at home (42%). While at home, significantly more men reported that they used the Internet to find partners (54%) than while on holiday (12%).

Sex and Substance-Use at Home and on Holiday

As shown in Table I, significantly more participants reported engaging in sex in combination with alcohol, ecstasy, methamphetamine, and Ketamine while on holiday than at home. Independent of sexual behavior, significantly more participants reported ecstasy and methamphetamine use on holiday than at home.

Differences Between Participants Who Did and Did Not Engage in UAI with Non-Main Partners on Holiday

Table II presents the comparisons between men who reported that they did and did not have UAI with non-main partners while on vacation in the gay resort. Participants reporting UAI with non-main partners on vacation were significantly younger, were more likely to live inside metropolitan areas, and to indicate that condom use was "too much trouble," "interrupts the heat of the moment," "reduces the pleasure of sex," and to indicate that "we tried a condom but he [my partner] lost his hard on."

Participants who reported UAI with non-main partners on vacation were more likely to be unattached and to report having more casual partners for UAI at home (Table II). On vacation, they were also more likely to report looking for sex partners in bars and on the beach. Those reporting UAI with non-main partners while on holiday also reported more use of methamphetamine alone as well as methamphetamine in combination with sex, and to report alcohol use combined with sex on holiday. Those engaging in UAI with non-main partners on vacation were less likely to practice safer sex "because of AIDS." They also correctly perceived themselves to be at more risk of getting HIV on vacation and recognized that their behavior was riskier on holiday than at home.

Table II. Comparison of Participants Who Did and Did Not Report Nonmain Partners for UAI on Holiday ($N = 551$)[a]

	UAI	No UAI	t or χ^2
Demographic variables			
Age[b] [*M* (*SD*)]	32.4 (8.12)	35.9 (10.03)	4.25*
Metropolitan residence (%)	65	35	14.19*
Condom attitudes			
Too much trouble (%)	75	25	75.74*
Interrupts the heat (%)	69	31	139.63*
Reduces the pleasure (%)	70	30	120.27*
Makes my partner lose his "hard on" (%)	66	34	40.42*
Sex, relationships, and cruising			
Current relationship (%)	17	83	19.99*
Per-day number of unprotected nonmain partners at home[c] [*M* (*SD*)]	.02 (.04)	.004 (.01)	5.19*
Look for sex partners in resort bars (%)	77	33	42.61*
Look for sex partners on holiday beaches (%)	64	36	67.95*
Substance use			
Alcohol during sex on holiday (%)	73	27	33.97*
Methamphetamine during sex on holiday (%)	60	40	62.00*
Any methamphetamine use on holiday (%)	55	45	45.42*
Perceptions of risk			
Likely to practice safer sex because of AIDS[d,e] [*M* (*SD*)]	2.3 (.67)	2.8 (.46)	8.09*
Perception of risk relative to other men in the gay resort[f] [*M* (*SD*)]	1.2 (.58)	.8 (.69)	5.60*
Perception of risk associated with behavior on holiday compared to home[g] [*M* (*SD*)]	1.4 (.76)	1.1 (.66)	3.76*

[a] Not all men responded to every item. The number of respondents who reported UAI varied from 146–149 and the number who reported no UAI on holiday.
[b] Range = 18–70.
[c] Range = 0–4.
[d] Lower scores indicate a lower likelihood of practicing safer sex because of AIDS and a lower estimation of risk.
[e] Range = 1–3.
[f] Range = 1–4.
[g] Range = 1–3.
* $p < .0001$.

Predictors of UAI with Non-Main Partners While on Holiday

Table III presents the results of the multiple linear regression analysis examining variables that predicted daily number of non-main partners for UAI on vacation. Independent variables were entered simultaneously. Beta weights and significance levels are shown in Table III. Table III presents the regression used to predict daily number of non-main partners for UAI on vacation. Four condom attitude items were significant predictors of UAI with non-main partners on holiday. A greater per-day number of men for UAI at home was also a significant predictor on UAI while on holiday. The number of non-main partners for UAI on holiday was also predicted by looking for sex partners on the beach and by a lower likelihood of practicing safer sex because of AIDS. The variance accounted for by the predictor variables was 23%.

Table III. Multiple Linear Regression Predicting the Per-day Number of Non-main Male Partners for UAI on Holiday ($n = 551$)

	β
Demographic variables	
Age	−.09
Education	−.04
Race/ethnicity	.05
Gay or bisexual?	−.01
Metro residence?	.06
Condom attitudes	
Too much trouble	.20***
Interrupts the heat	−.15**
Reduces the pleasure	.19***
Partner loses his hard on	.10*
Sex, relationships & cruising	
Main partner relationship?	.05
Per day number of non-main partners at home for UAI	.18***
Beach	.13**
Gay bars	−.01
Substance use	
Alcohol and sex	.05
Methamphetamine and sex	−.02
Any methamphetamine use	−.02
HIV related risk and perceptions	
Likely to practice safer sex because of AIDS	−.12**
Perception of risk relative to non-main partners of getting HIV on vacation	.02
Perception of riskiness of behavior on holiday compared to home	−.01

*$p < .05$. **$p < .01$. ***$p < .0001$.

DISCUSSION

This study compared the self-reported attitudes and behaviors of MSM when they were "at home" to their behavior on "holiday" in a gay resort. Participants reported significantly more non-main partners per day for UAI in the gay resort than at home. The ratio of unprotected to protected non-main anal partners while at the resort area was also higher than that at home. Findings from the regression analysis indicated that those engaging in UAI with other men on holiday were not particularly concerned about AIDS, had more negative attitudes toward condom use, reported more UAI with non-main partners while at home, and were more likely to report meeting partners at the beach.

Two data collection methods were used to collect these data (Internet and paper and pencil surveys) and different data collection methods can potentially introduce different types of data collection biases. A comparison of these two data collection methods with MSM was previously described by Whittier, Seeley and, St. Lawrence (2003). In this study, relatively few differences were present between the two data collection methods, although more Internet than paper respondents reported bisexual identity, non-metropolitan residence, higher numbers of non-main male partners for UAI, and more alcohol use than did paper-and-pencil respondents. In the present analysis of within-subject risk, the data collection method was initially included in the regression analysis and was not a significant predictor of the number of non-main partners for UAI on holiday.

The survey instrument was brief and relied on a number of single item measures to maximize completion rates for this self-administered survey. A limitation inherent in that brevity is that single item measures to do not allow estimation of the survey's psychometric properties. Similar brief survey instruments have been widely used in similar research studies, all of which share this limitation (Crosby, DiClemente, & Mettey, 2003; Kelly et al., 1990; St. Lawrence, Hood, Brasfield, & Kelly, 1989). An additional measurement limitation is that the response formats for most items were categorical in nature. As a consequence, a more restricted range of data analytic strategies were possible than if interval-level measurement had been used. The advantage of using categorical items was that the "check off" format was user friendly and proved to be easy for the participants to complete in settings where multiple distractions were present. Although each participant completed the survey unobserved, the extent to which the social setting may have influenced response patterns is unknown.

One finding of interest was related to a pattern identified in the analysis that suggested those who reported inconsistent condom use with main partners reported more consistent condom use with non-main partners. This finding was also reported by Henriksson (1996). However, the reasons for this finding cannot be determined from this data set but may be related to participants' HIV status, knowledge of a partners' HIV status, or to acting on assumptions about one's own or a partner's HIV status. Results could also be related to a number of other variables like norms governing sexual relationships between these men. One finding of concern is that HIV-positive participants reported less frequent UAI with lovers and more UAI with non-main partners than participants who reported being HIV negative. Knowledge of HIV status and even unspoken assumptions about HIV status may guide condom use decision-making by some gay men (Bloom, Leichliter, Whittier, & Riley, 2003). However, data on seroconcordance between partners and sensation seeking were not gathered in this survey and would be helpful to interpret the meaning of these findings. Nonetheless, this study is the first to compare MSM's

sexual behavior at home with those on vacation and the findings strongly suggest that careful delineations of the contexts in which sexual behavior take place warrant consideration. Additional comparative studies would be helpful and qualitative studies might aid in describing risks and in clarifying the reasons for these results.

Much of the thinking about sexual activity and risk on holiday is based on ideas about the salience of differing social contexts that encourage sex and health vs. risk-related activities. For example, Apostolopoulous et al. (2002) examined sexual and substance use behavior of American spring break vacationers to see whether sexual opportunity and the popularity of substance use resulted in greater risk taking while on spring break. According to Apostolopoulous et al., the spring break environment is similar to other risk-priming situations such as "raves/parties, fraternity/sorority gatherings, bars/pubs/clubs, carnivals, and organized forms of pleasure travel" (p. 734). This is because these are settings where the central norms that define much of every day life are countered by norms that encourage sexual activity and substance use. Similarly, disinhibition may ensue from heightened exposure to alcohol and drugs, thereby further increasing risk-taking in contexts where substance use is normative or encouraged. Sexual adventurism or even a penchant for esoteric sexual practices and seeking partners who will participate in them could also play a role in the increased risk taking this study identified in MSM (Kippax et al., 1998). For example, Crosby, DiClemente, and Mettey (2003) found high rates of UAI in a commercial establishment that supported male-male sexual liaisons.

On the other hand, behavior that is normative in the home environment may be amplified in the holiday setting. For example, norms of masculine sexual expression, including risk taking, may lead to increases in risky sex between gay men while they are on holiday. This may be especially so in resorts that are predominately marketed to gay males and that provide increased opportunities for sexual expression, as there is increased population and spatial density between gay men in such settings. In addition to the fact that vacationers are geographically mobile, another important difference between the home and holiday contexts is that days at home probably allow fewer leisure hours than the days on vacation; hence, less time per day may be available to look for potential partners or to engage in sex.

Several recommendations extend from the findings of this study. Further research to more fully conceptualize and assess sexual behaviors of gay men in the home and holiday situations may be useful (Webster et al., 2003). In addition, mathematical modeling studies could make help to clarify unique and the interactive contributions between the individual and the surrounding context to risk behavior. Apostolopoulous et al. (2002) collected longitudinal data from heterosexuals to model interactions between individual and situational factors within the "spring break" context and a similar paradigm focusing on gay men would be informative. When Binson et al. (2001) utilized a population-based representative sample of gay men to examine rates of sexual risk taking in public sex settings, they found a "significant association between individual characteristics, venue type, and risk behavior" (p. 1484) that would not have been discovered if venues had been disregarded or treated as a constant. More theoretically and methodologically sophisticated research on "holiday" sexual behavior by gay men also appears to be warranted in social, behavioral, and epidemiological research on sexuality, sexual risk taking and STIs. Additionally, theory-based studies into risk-taking by MSM and sexual decision-making can better inform the development of empirically proven and conceptually grounded interventions to reduce risk. The results of this study are clear in that sexual risk taking by gay men in the sample was greater while they are on gay holidays than when they are at home. However, a limitation of the present study is that it relied on a convenience sample and further research that assesses population rates of gay men's sexual risk-taking in holiday and home contexts would be helpful. Finally, targeting prevention resources to the riskiest individuals and contexts may enable a parsimonious and cost-effective approach to STI prevention.

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