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ORIGINAL PAPER

Consent for HIV Testing Among Adolescent Sexual Minority Males: Legal Status, Youth Perceptions, and Associations with Actual Testing and Sexual Risk Behavior

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Abstract
This brief report presents a preliminary investigation of the relations between minor consent laws for HIV testing/treatment and testing behavior among adolescent sexual minority males (ASMM; $N = 127$; ages 14–17). Most participants had legal capacity to consent without parental/guardian permission (HIV testing: 79%; HIV testing/treatment: 65%). Despite having this legal right, few (15%) had ever tested. Capacity to consent was not associated with HIV testing in this sample; nevertheless, those who had not disclosed their sexual activity to parents/guardians were less likely to have tested. Confidentiality concerns may be a barrier to testing for these youth despite laws intended to enable independent testing.

Keywords Adolescent · Sexual minority · HIV · Minor consent laws · MSM

Introduction

Adolescent sexual minority males (ASMM) account for 92% of new HIV infections among males in their age cohort in the United States (U.S.) [1]. The Centers for Disease Control and Prevention (CDC) recommends that all adolescents, regardless of perceived risk, get screened for HIV at least once, and annual HIV screening for sexual minority males [2]. Despite increased risk and CDC recommendations, a recent study using Youth Risk Behavioral Surveillance data founds that only one quarter of sexually active ASMM have ever tested for HIV [3].

Prominent barriers to HIV testing among adolescents include confidentiality concerns, such as the fear that parent/guardian consent will be required or that parents/guardians will be notified of the results. Notification may occur through communication with the medical provider or through an insurance company explanation of benefits (EOB) statement. Among sexually active 15–17 year old participants in the 2013–2015 National Survey of Family Growth, 23% reported that they would not seek sexual health care because their parents or guardians might find out [4]. Confidentiality concerns may be a particularly salient barrier for ASMM who fear that their parents/guardians might react negatively to disclosure of their sexual activity and/or male–male sexual preferences [5].

In an attempt to allay some of these confidentiality concerns, states across the U.S. have enacted statutes permitting minors to waive parental/guardian consent for HIV testing and treatment. As of April 1, 2018, 32 states explicitly allow minors to consent to HIV testing without parental/guardian permission [6]. Of those states, 27 allow minors to consent to both HIV testing and treatment [6]. Some states have also provided specific age cutoffs for this legal right (e.g., only youth over the age of 14 are allowed to waive parental/guardian permission in Idaho) [6].

Although these laws are meant to protect youth from unwanted disclosure to their parents/guardians—and thereby increase uptake of testing and treatment—there

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are limitations to the confidentiality they provide. Eighteen states allow medical providers to inform parents/guardians that an adolescent is seeking or receiving HIV testing and treatment when those providers deem disclosure to be in the best interests of the minor [6]. Only 6 states explicitly protect the confidentiality of adolescents who are insured as dependents on their parent/guardian's insurance—for example, by requiring the minor's written authorization to disclose information on the EOB form [7]. As the vast majority of adolescents are covered by parental/guardian insurance [8], youth in the remaining states and the District of Columbia may be legally able to consent to HIV testing and treatment, but they cannot do so confidentially unless they can locate free services or pay providers and pharmacies out of pocket.

Although minor consent laws for HIV testing and treatment were designed to decrease confidentiality barriers for adolescents, we were unable to find research assessing how these laws relate to testing behavior. As an initial investigation of this topic, this brief report uses data from 127 sexually experienced ASMM to assess: [1] differences between ASMM with and without legal capacity to consent to HIV testing and treatment; [2] associations between legal capacity to consent and testing behavior; and [3] whether ASMM who have tested believe that parental/guardian consent was required. Understanding how laws influence testing decisions among ASMM will aid in the refinement of policies and practices meant to reduce HIV among this group by minimizing confidentiality barriers to care.

Method

Study Design

Questions related to HIV testing were included in an online sexual health survey of ASMM. Study procedures are described in detail elsewhere [9]. Briefly, participants were recruited in June–July 2017 via advertisements and posts on social media (e.g., Instagram, Facebook). Eligibility criteria included the following: [1] aged 14 to 17; [2] cisgender male (i.e., male sex at birth and male gender identity); [3] self-identify as gay/bisexual, report being sexually attracted to males, or report voluntary past year sexual contact with a male partner; [4] reside in the U.S.; and [5] have a personal email address. Potential participants were directed to the study website, hosted using REDCap, for screening and consent. Capacity to consent was assessed using four questions that evaluated respondents' understanding of study procedures, risks, and benefits. Respondents who were unable to accurately answer all four questions after three tries were designated ineligible. Those who consented received an email containing a unique survey link. The survey took 30 min ($SD = 12$) on average, and completers were emailed a $15 Amazon.com gift code. To protect against fraudulent entries or multiple enrollments, screening and survey responses were cross-referenced using date of birth, location, sexual activity, and email address. All procedures, including a waiver of parental/guardian consent for the survey, were reviewed and approved by the hospital IRB.

Measures

Socio-demographics

Characteristics included age (continuous), race/ethnicity (White, Black/African American, Latino, Mixed Race/Other), sexual orientation (gay-identified, other), disclosure about sexual attraction to males with a parent/guardian (yes, no), and census region of the U.S. (Northeast, Midwest, South, West; designated using self-reported state of residence).

Sexual Behavior

Participants were asked about ever having voluntary sexual contact (i.e., kissing, mutual masturbation, oral sex, vaginal sex, and/or anal sex) with another person (yes, no). Participants who answered yes were asked whether they have told their parents/guardians they are sexually active (yes, no) and the gender of their sexual partners (male, female, transgender; check all that apply). Participants who reported female or male partners were asked about engagement in specific sexual behaviors with those partners (female: kissing, mutual masturbation, oral sex, vaginal sex, anal sex; male: kissing, mutual masturbation, oral sex, anal sex; check all that apply). Those reporting ever having male–male anal sex were asked to report the number of total and condom-protected times they had anal sex with a male partner. Using this information, a calculated field established the number of condomless anal sex acts, which was automatically presented to participants, who were asked to confirm it. A variable capturing ever having male–male condomless anal sex was created (yes, no).

HIV Testing

Participants reported whether they had ever been tested for HIV (yes, no, I don't know). Those who responded yes were asked if they had tested within the past year (yes, no, I don't know). Those who reported yes to testing in the past year were asked, "Was parent/guardian permission required for this service?" (yes, no, I don't know). HIV test questions (lifetime and past year) were coded yes = 1, no or I don't know = 0.

Legal Capacity to Consent to HIV Testing and Treatment

To correspond with when participants were completing the survey, the state laws as of June 1, 2017 [10] along with age and state of residence were used to code participants as having legal capacity to consent to HIV testing (yes, no) and HIV testing/treatment (yes, no) without parent/guardian permission. If the laws specified age cutoffs, only participants meeting the age requirement in their state were considered to have legal capacity. If a state allowed testing for both HIV testing and treatment without parent/guardian permission, participants were categorized as yes for testing and yes for testing/treatment.

Analyses

Analyses were limited to participants who reported having had voluntary sexual contact ($N = 127$). Socio-demographic and sexual behavior differences in testing behaviors and beliefs about guardian/parent permission requirements were assessed using Fisher's exact tests. Firth logistic regression was used to assess associations between legal capacity to consent to HIV testing and ever testing for HIV controlling for variables significant in bivariate analyses (age, having not disclosed sexual activity to parents/guardians, condomless anal sex with a male partner). Vaginal sex was not included in the model due to its significant association with male–male condomless anal sex and the higher probability of HIV transmission via condomless anal sex. Analyses were conducted using Stata 15.

Results

Participants

Average age was 16 years old ($SD = 1.0$). Half (51%) identified as racial/ethnic minorities. Participants lived in 32 states (West: 33%, South: 32%, Midwest: 19%; Northeast: 16%). Most (61%) self-identified as gay and 107 (85%) had not disclosed their sexual activity to their parents/guardians. One-third (32%) reported male–male condomless anal sex. The majority had legal capacity to consent to HIV testing ($n = 101$, 79%) and HIV testing/treatment ($n = 83$, 65%) without parental/guardian permission.

HIV Testing

Nineteen participants (15%) reported lifetime testing for HIV; most (16/19; 84%) in the past year. Participants were more likely to have ever tested for HIV if they were older, reported anal sex (including condomless anal sex) with male partners, or reported oral or vaginal sex with female partners. Participants who had not disclosed their sexual behavior to their parents/guardians were less likely to have tested. Nine of the 16 participants (56%) who tested for HIV in the past year either believed that parental/guardian permission was required ($n = 4$, 25%) or were uncertain about this ($n = 5$, 31%). Most (6/9; 67%) of those participants had legal capacity to consent to testing without parental/guardian permission (Table 1).

In multivariable analysis, having legal capacity to consent to HIV testing was not associated with ever testing for HIV (Adjusted Odds Ratio [AOR] 0.3, 95% Confidence Interval [CI] 0.1, 1.1). Compared to those who had disclosed their sexual activity to their parents/guardians, participants who had not disclosed were 70% less likely (AOR 0.3, 95% CI 0.1, 0.9) to have ever tested for HIV. Participants who reported engaging in condomless anal sex had three time the odds (AOR 3.4, 95% CI 1.2, 9.6) of ever testing for HIV.

Discussion

ASMM experience substantial sexual health disparities in the U.S., including elevated risk for HIV [1]. Increasing HIV testing among ASMM is a key component of the national strategy to decrease the HIV disparities experienced by these youth [11]. Despite this goal, the majority of ASMM have not tested for HIV [3]. One barrier to testing may be concerns about confidentiality [4]. State laws permitting minors to consent to HIV services without parental/guardian involvement are one strategy for alleviating this barrier. This study is a preliminary assessment of whether minor consent laws for HIV testing and treatment are related to testing behavior among ASMM.

Several findings are noteworthy. First, most ASMM in our study lived in states that legally permitted them to consent to HIV testing and treatment without parent/guardian permission. Second, few participants reported ever testing for HIV (15%), even though all should have been tested given CDC guidelines [2, 12] and the majority had legal capacity to consent to testing in their states. CDC guidelines recommend a minimum of a one-time screening for adolescents 13 years old or older and annual screening for sexual minority males [2, 12]. More frequently testing (e.g., every 3 to 6 months) is recommended for individuals who engage in risk behaviors [2, 12]. Although youth in this sample who reported sexual risk behaviors (i.e., vaginal sex, anal sex) were more likely to have tested, only 38% (9/24) of those who reported vaginal sex and 23% (13/56) of those who reported anal sex had ever tested. These results corroborate previous research indicating that most sexually active ASMM (including a substantial proportion of those who report engaging in risk) have not tested for HIV [3]. Additional research assessing

Table 1 HIV testing behaviors and beliefs among sexually active 14 to 17 year old sexual minority males in the United States

	HIV test (ever)				HIV test (past year)				Believes guardian permission required for testing				
	Total	Yes	No		Total	Yes	No		Total	Yes	No	Unsure	
	N = 127	*n* = 19	*n* = 108		*N* = 19	*n* = 16	*n* = 3		*N* = 16	*n* = 4	*n* = 7	*n* = 5	
	n (%)	*n* (%)	*n* (%)	χ^2	*n* (%)	*n* (%)	*n* (%)	χ^2	*n* (%)	*n* (%)	*n* (%)	*n* (%)	χ^2
Socio-demographics													
Census region				1.4				5.0					4.2
Northeast	20 (16)	4 (21)	16 (15)		4 (21)	4 (25)	0 (0)		4 (25)	2 (50)	1 (14)	1 (20	
Midwest	24 (19)	4 (21)	20 (19)		4 (21)	2 (13)	2 (67)		2 (13)	1 (25)	1 (14)	0 (0)	
South	41 (32)	4 (21)	37 (34)		4 (21)	4 (25)	0 (0)		4 (25)	0 (0)	2 (29)	2 (40)	
West	42 (33)	7 (37)	35 (32)		7 (37)	6 (38)	1 (33)		6 (38)	1 (25)	3 (43)	2 (40)	
Age				9.3*				2.9					6.6
14	14 (11)	2 (11)	12 (11)		2 (11)	1 (6)	1 (33)		1 (6)	1 (25)	0 (0)	0 (0)	
15	29 (23)	4 (21)	25 (23)		4 (21)	4 (25)	0 (0)		4 (25)	1 (25)	3 (43)	0 (0)	
16	45 (35)	2 (11)	43 (40)		2 (11)	2 (13)	0 (0)		2 (13)	0 (0)	1 (14)	1 (20)	
17	39 (31)	11 (58)	28 (26)		11 (58)	9 (56)	2 (67)		9 (56)	2 (50)	3 (43)	4 (80)	
Race/ethnicity				5.5				2.2					7.1
White	62 (49)	7 (37)	55 (51)		7 (37)	5 (31)	2 (67)		5 (31)	3 (75)	1 (14)	1 (20)	
Black/African American	20 (16)	4 (21)	16 (15)		4 (21)	4 (25)	0 (0)		4 (25)	0 (0)	3 (43)	1 (20)	
Latino	29 (23)	3 (16)	26 (24)		3 (16)	3 (19)	0 (0)		3 (19)	0 (0)	2 (29)	1 (20)	
Mixed Race/Other	15 (12)	5 (26)	10 (9)		5 (26)	4 (25)	1 (33)		4 (25)	1 (25)	1 (14)	2 (40)	
Gay identified	78 (61)	11 (58)	67 (62)	0.1	11 (58)	9 (56)	2 (67)	0.1	9 (56)	1 (25)	5 (71)	3 (60)	2.3
"Out" to at least one guardian	54 (43)	9 (47)	45 (42)	0.2	9 (47)	7 (44)	2 (67)	0.5	7 (44)	3 (75)	2 (29)	2 (40)	2.3
Sexual behavior													
Have NOT disclosed sexual activity to guardian(s)	107 (85)	12 (63)	95 (89)	8.3*	12 (63)	10 (63)	2 (67)	0.0	10 (63)	2 (50)	5 (71)	3 (60)	0.5
Male partners													
Kissing	104 (82)	18 (95)	86 (80)	2.5	18 (95)	15 (94)	3 (100)	0.2	15 (94)	3 (75)	7 (100)	5 (100)	3.2
Mutual masturbation	83 (65)	14 (74)	69 (64)	0.7	14 (74)	12 (75)	2 (67)	0.1	12 (75)	4 (100)	3 (43)	5 (100)	6.9
Oral sex	75 (59)	12 (63)	63 (58)	0.2	12 (63)	10 (63)	2 (67)	0.0	10 (63)	3 (75)	3 (43)	4 (80)	2.1
Anal sex	54 (45)	13 (69)	41 (28)	6.1*	13 (69)	11 (69)	2 (67)	0.0	11 (69)	2 (50)	6 (86)	3 (60)	1.8
Condomless anal sex	40 (32)	11 (58)	29 (27)	7.2**	11 (58)	9 (56)	2 (67)	0.1	9 (56)	2 (50)	4 (57)	3 (60)	0.1
Female partners													
Kissing	60 (47)	12 (63)	48 (44)	2.3	12 (63)	11 (69)	1 (33)	1.4	11 (69)	3 (75)	4 (57)	4 (80)	0.8
Mutual masturbation	36 (28)	8 (42)	28 (26)	2.1	8 (42)	7 (43)	1 (33)	0.1	7 (44)	0 (0)	3 (43)	4 (80)	5.8
Oral sex	31 (24)	9 (47)	22 (20)	6.4*	9 (47)	8 (50)	1 (33)	0.3	8 (50)	0 (0)	4 (57)	4 (80)	5.9
Vaginal sex	24 (19)	9 (48)	15 (14)	11.8**	9 (47)	8 (50)	1 (33)	0.3	8 (50)	0 (0)	4 (57)	4 (80)	5.9

Table 1 (continued)

	HIV test (ever)				HIV test (past year)				Believes guardian permission required for testing			
	Total	Yes	No		Total	Yes	No		Total	Yes	No	Unsure	
	$N=127$	$n=19$	$n=108$		$N=19$	$n=16$	$n=3$		$N=16$	$n=4$	$n=7$	$n=5$	
	n (%)	*n* (%)	*n* (%)	χ^2	*n* (%)	*n* (%)	*n* (%)	χ^2	*n* (%)	*n* (%)	*n* (%)	*n* (%)	χ^2
Anal sex	10 (8)	1 (5)	9 (8)	0.2	1 (5)	1 (6)	0 (0)	0.2	1 (6)	0 (0)	0 (0)	1 (20)	2.3
Capacity to consent for HIV testing and treatment													
Can consent to testing[a]	101 (80)	13 (68)	88 (82)	1.7	13 (69)	10 (63)	3 (100)	1.6	10 (63)	2 (50)	4 (57)	4 (80)	1.0
Can consent to testing/treatment[a]	83 (65)	12 (63)	71 (66)	0.0	12 (63)	9 (56)	3 (100)	2.1	9 (60)	2 (50)	4 (57)	3 (60)	0.1

[a]Has legal capacity to consent without parental/guardian permission

*$p<0.05$

**$p<0.01$

ways to remove barriers and facilitate testing for these youth is needed.

Third, a substantial proportion of those who tested within the last year believed that parental/guardian permission was required (or were unsure about parental/guardian permission requirements), even when that belief was erroneous. In fact, almost all of these youth would have been legally able to consent themselves. Although having legal capacity to consent was not associated with HIV testing in this sample, disclosure of sexual activity to parents/guardians was a significant predictor of testing behavior. Specifically, those who had not told their parents/guardians that they were sexually active (85% of our sample) were 70% less likely to have tested for HIV. Taken together these results suggest (a) that many ASMM may not be aware of their legal right to consent to testing without parental/guardian permission, and (b) that testing behavior among those who are unaware of their legal rights may be guided by concerns that their parents/guardians will find out about their sexual behaviors if they test. Additional research assessing awareness, understanding, and perceptions of minor consent laws for testing and treatment as well as associations with testing intentions and behavior is needed to more thoroughly understand the impact of these laws.

Study limitations should be kept in mind when considering results. Our findings constitute a preliminary assessment of these associations using a relatively small sample from 32 states. Additional research with larger, more representative samples from all states will allow for a more rigorous understanding of how state laws influence behavior. Additionally, we assumed that testing occurred in participants' state of residence; we did not track the state in which they tested. The laws themselves may also be correlated with other state-level variables that predict uptake of HIV services (e.g., social support or nondiscrimination protections based on sexual orientation), but we have focused our analyses solely on laws regarding adolescent consent. Further, we only asked participants who had tested in the last year if parental/guardian permission was required for testing. Future research should assess whether beliefs about parental/guardian permission are related to testing behaviors among non-testers as well as testers. Our study also did not assess methods of paying or beliefs about the ability to maintain confidentiality while using parents' insurance; these are important questions for future research. Lastly, only a minority of our participants reported engaging in anal sex. As anal sex is the most likely means of sexual transmission of HIV, future research should consider oversampling youth who engage in this higher risk behavior to better understand if the relation between the laws and testing behavior differ by sexual risk.

In conclusion, our preliminary results indicate that although most ASMM in this sample had the legal right to consent to HIV testing and treatment without parental/

guardian permission, (a) few reported testing and (b) most of those who tested were unaware that parental/guardian permission was not required. Further, even though legal capacity to consent to HIV testing was not associated with testing behavior in this sample, youth who had not disclosed their sexual activity to their parents/guardians were significantly less likely to have tested. These results suggest that confidentiality may be a concern for these youth despite the laws that are in place to protect them. The current minor consent laws are inconsistent across states and limited in their ability to protect the confidentiality of these youth [6, 7]. As confidentiality concerns likely contribute to low testing rates among ASMM, additional research with larger, more geographically and demographically diverse samples is need to more thoroughly assess the impact of these laws on testing behaviors, methods to leverage legal protections to allay confidentiality concerns, and ways to inform youth about their legal rights. Taking steps to mitigate confidentiality concerns for these youth is necessary to curtail the HIV incidence among ASMM.

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Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

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