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**Preliminary Report:  
Sexually Transmitted Infection (STI)  
risk among single adults in the  
*Trojan/SIECCAN  
Sexual Health at Midlife Study***

Alex McKay, Ph.D., Sex Information and Education Council of Canada (SIECCAN), Robin Milhausen, Ph.D., University of Guelph, and Christopher Quinn-Nilas, M.A., University of Guelph.

# **Preliminary Report:**

## **Sexually Transmitted Infection (STI) risk among single adults in the *Trojan/SIECCAN Sexual Health at Midlife Study***

### **Introduction**

Although younger people continue to have higher rates of sexually transmitted infections (STIs), epidemiological data indicates that STI rates among older Canadians are increasing. For example, from 2003 to 2012 the reported rate of Chlamydia among people aged 40 to 59 increased 153% (Public Health Agency of Canada, 2015a). The proportion of HIV cases that were among those aged 50 or older increased from 15.0% in 2009 to 21.9% in 2014 (Public Health Agency of Canada, 2015b). Data from the 2009 - 2011 *Canadian Health Measures Survey* indicated that the seroprevalence of HSV-2 (the genital herpes virus) was 19.9% among women aged 50 to 59 and the majority of those with HSV-2 were unaware that they were infected (Rotermann, Langlois, Severini, & Totten, 2013). At present, there is little data available on the behavioural risk for STI among the general population of older Canadians (Public Health Agency of Canada, 2015c). Behavioural risk data is necessary to formulate effective STI prevention programs to address the high prevalence of STI among older Canadians.

This preliminary report provides data on number of sexual partners, condom use at most recent penis-vagina intercourse (PVI), condom use at most recent PVI by number of sexual partners, condom use at last PVI by relationship status, condom use at last PVI by relationship to partner, and levels of concern about STI of Canadians drawn from the *Trojan/SIECCAN Sexual Health at Midlife Study* of sexuality and sexual health among Canadians aged 40 to 59.

### **Method**

The *Trojan/SIECCAN Sexual Health at Midlife Study* was commissioned by the *Trojan*<sup>TM</sup> Sexual Health Division of Church and Dwight Canada and developed in partnership with the Sex Information and Education Council of Canada (SIECCAN). The sample was comprised of 2,400 Canadian midlife adults (1200 men and 1200 women) between the ages of 40 and 59 (25 per cent in each of four age categories: 40-44; 45-49; 50-54; and 55-59). Of the total sample, 91.5% were heterosexual. Participants were Leger panelists; the panel was created using a random telephone recruiting method and is comprised of approximately 460,000 members representative of the Canadian population. Participants completed an online questionnaire assessing sexual health, happiness, and pleasure in addition to sexual behaviours and the experience of sexual problems. The “don’t know/prefer not to answer” responses have been removed from the data for this report.

The sample for this STI behaviour risk report was restricted to individuals who, based on their responses about their relationship status, reported that they were currently single (i.e., not dating, casually dating, seriously dating: Respondents were considered to be not single if they reported that they were married or common-law). In total, there were 1200 single respondents, of which 600 were male and 600 were female. Individuals were equally distributed across four age categories, with 300 individuals each in the 40-44, 45-49, 50-54, and 55-59 age ranges.

Many of the items developed for the *Trojan/SIECCAN Sexual Health at Midlife Study* were developed from items used in the *Trojan/SIECCAN Sexual Health Study* examining the sexual health and well-being of Canadian university students (Milhausen et al., 2013; Wood, McKay, Komarnicky & Milhausen, 2016). Although the categorization of relationship contexts for single people was slightly different for the university sample (not dating, casual dating, committed dating), data from the two studies allows us to compare the STI risk behaviours of single midlife Canadians aged 40 to 59 to single university students aged 18 to 26.

## Results

### Number of sexual partners

Of single respondents, a little over half reported at least one sexual partner in the previous 12 months. Among individuals reporting one or more sexual partners in the previous year, a little over half of men (54.9%) and just under a third of women (32.0%) reported two or more sexual partners (Table 1).

Table 1: Number of sexual partners among single midlife men and women in the past year (Male n = 276; Female n = 288; N = 612\*)

	# of Partners		
	1 % (N)	2 % (N)	3+ % (N)
Male	45.1 (146)	19.1 (62)	35.8 (116)
Female	68.1 (196)	16.7 (48)	15.3 (44)
Total	55.9 (342)	18 (110)	26.1 (160)

\*Note: Individuals who did not respond to the question, or responded “Don’t know/prefer not to answer” and individuals who indicated they had 0 sexual partners in the last year were not included.

### Condom use at most recent PVI

Among single individuals participating in the study, 834 (77.2%) indicated that they had engaged in penis-vagina intercourse (PVI) during their last sexual encounter. As indicated in Table 2, just over a third of single men (35.3%) and just over a quarter of single women (27.6%) reported that they used a condom at last PVI. In contrast, among single university students, condom use at last PVI was much higher (men/61.1%, women/50.6%). It is also clear that for both midlife single men and women, condom use at last PVI declines with age.

Table 2: Percentage of single midlife men and women who used a condom at last penis-vagina intercourse? (Male n = 388; Female n = 442; N = 830)

Gender		Did you use a condom for penis-vagina intercourse?	
		Yes % (N)	No % (N)
Male	40-44	39.6 (40)	60.4 (61)
	45-49	37.1 (33)	62.9 (56)
	50-54	39.4 (41)	60.6 (63)
	55-59	24.5 (23)	75.5 (71)
	Total	35.3 (137)	64.7 (251)
Female	40-44	35 (36)	65 (67)
	45-49	25.2 (28)	74.8 (83)
	50-54	28.9 (33)	71.1 (81)
	55-59	21.9 (25)	78.1 (89)
	Total	27.6 (122)	72.4 (320)

### Condom use at most recent PVI by number of sexual partners

Although single individuals with only one sexual partner in the previous 12 months may, for a variety of reasons, be at high risk for STI (e.g., sequential partnerships over a number of years, having a partner with an undiagnosed STI), condom use at last PVI among participants reporting one sexual partner was low with under a fifth of men (18.7%) and women (14.3%) reporting condom use at last PVI (Table 3). For single participants with three or more sexual partners in the previous year, about half of men (50.8%) and about a third of women (34.3%) reported condom use at last PVI, indicating that a high percentage of single midlife Canadians with multiple partners are at high risk for STI.

Table 3: Condom use at last penile-vaginal intercourse among single midlife men and women with 1,2, and 3+ sexual partners in the last year (Male n = 236; Female n = 243; N = 479\*)

Gender	# of Partners	Did you use a condom for penis-vagina intercourse?	
		Yes	No
Male	1	18.7 (23)	81.3 (100)
	2	52.1 (25)	47.9 (23)
	3+	50.8 (33)	49.2 (32)
	Total	34.3 (81)	65.7 (155)
Female	1	14.3 (24)	85.7 (144)
	2	27.5 (11)	72.5 (29)
	3+	34.3 (12)	65.7 (23)
	Total	19.3 (47)	80.7 (196)

\*Note: Individuals who did not respond to the question, or responded “Don’t know/prefer not to answer” or did not report PVI in the previous 12 months and individuals who indicated they had 0 sexual partners in the last year were not included.

## Condom use at last PVI by relationship status

Single participants in the study classified themselves as either “Not dating”, “Casually dating”, or “Seriously dating”. Although these classifications are not necessarily an accurate indicator of STI risk, examining condom use by relationship status does illustrate how these self-identified classifications may influence condom use behaviour. Nevertheless, it can be speculated that people who classify themselves as “Not dating” or “Casually dating” are unlikely to be aware of the STI status of their sexual partners.

As indicated in Table 4, condom use at last PVI was low regardless of relationship status but it is particularly notable that a minority of both men and women who classified themselves as “not dating” or “casually dating” reported condom use at last PVI. In contrast, university students in the earlier study who classified themselves as “Not dating” or as “Casually dating” were much more likely than their older counterparts to report condom use at last PVI. For example, for those who classified themselves as not dating, 66.3% of single university men versus 37.6% of single midlife men reported condom use at last PVI and among single university women who were not dating, 68.1% used a condom at last PVI versus 38.8% of single midlife women (See Table 4 for midlife percentages).

Table 4: Condom use at last penis-vagina intercourse among midlife Canadians by relationship status (Male n = 388; Female n = 442; N = 830)

Gender		Did you use a condom for penis-vagina intercourse?	
		Yes	No
Male	Not dating	37.6 (67)	62.4 (111)
	Casually dating	44.8 (56)	55.2 (69)
	Seriously dating	16.5 (14)	83.5 (71)
	Total	35.3 (137)	64.7 (251)
Female	Not dating	38.8 (81)	61.2 (128)
	Casually dating	29.7 (33)	70.3 (78)
	Seriously dating	6.6 (8)	93.4 (114)
	Total	27.6 (122)	72.4 (320)

## Relationship to most recent sexual partner

The *Trojan/SIECCAN Sexual Health at Midlife Study* examined the relationship of single respondents to their most recent sexual partners using relationship categories that are often used to examine the sexual lives of younger people (e.g., hook ups, friends with benefits, booty calls etc.). As indicated in Table 5, nearly a quarter (24.2%) of single men reported that their most recent sexual encounter was a hook up. In addition, about a quarter of men (28.5%) and women (24.1%) reported that their most recent sexual encounter took place in the context of a friends with benefits relationship. In sum, when single participants were asked to identify the relationship type for their most recent sexual encounter, 78.1% of men and 59% of women chose a relationship type other than “Committed dating” (i.e. monogamous).

Table 5: Relationship of single midlife men and women to their last sexual partner (Male n = 438; Female n = 402; N = 840)

	Male % (N)	Female % (N)
One time sexual encounter (i.e. hook up/ one night stand)	24.2 (106)	9.5 (38)
Sexual partner with whom you are friends with no commitment (i.e. friends with benefits)	28.5 (125)	24.1 (97)
Sexual partner with whom you occasionally meet for sex but for no other purpose (i.e. booty call)	9.8 (43)	7.2 (29)
Dating but not committed	15.5 (68)	18.2 (73)
Committed dating (i.e. monogamous)	21.9 (96)	41 (165)
Total	100 (438)	100 (402)

### **Condom use at last PVI by relationship to most recent sexual partner**

As indicated in Table 6, condom use was more common among midlife single adults for more casual sexual relationship types. However, condom use for “casual sex” was low. For example, 34.5% of single midlife men and 35.7% of single midlife women did not use a condom for last PVI that was a “hook up/one night stand.” In contrast, for university students aged 18 to 26 participating in the earlier Trojan/SIECCAN study, only 22% of men and 15.6% of women did not use a condom for a hook up/one night stand.

Table 6: Condom use at last PVI by relationship to partner (Male n = 302; Female n = 328; N = 630\*)

		Did you use a condom for penis-vagina intercourse?	
		Yes	No
Male	One time sexual encounter (i.e. hook up/ one night stand)	65.5 (38)	34.5 (20)
	Sexual partner with whom you are friends with no commitment (i.e. friends with benefits)	42.4 (39)	57.6 (53)
	Sexual partner with whom you occasionally meet for sex but for no other purpose (i.e. booty call)	44 (11)	56 (14)
	Dating but not committed	33.3 (17)	66.7 (34)
	Committed dating (i.e. monogamous)	26.3 (20)	73.7 (56)
	Total	41.4 (125)	58.6 (177)
Female	One time sexual encounter (i.e. hook up/ one night stand)	64.3 (18)	35.7 (10)
	Sexual partner with whom you are friends with no commitment (i.e. friends with benefits)	37.3 (28)	62.7 (47)
	Sexual partner with whom you occasionally meet for sex but for no other purpose (i.e. booty call)	48.1 (13)	51.9 (14)
	Dating but not committed	33.3 (21)	66.7 (42)
	Committed dating (i.e. monogamous)	17 (23)	83 (112)

Total

31.4 (103)

68.6 (225)

\*Note: excluding individuals who reported that they were living with, engaged to, or married to their last sexual partner. That is, individuals who were currently single at the time of the study but whose most recent PVI occurred when they were living with, engaged to, or married to their partner have been excluded from the data presented in this table.

### Concern about STI among single midlife men and women

Participants in the *Trojan/SIECCAN Sexual Health at Midlife Study* were asked about their level of concern about contracting an STI. Levels of concern were low. For example, 56.0% of single men and 61.3% of single women were “not very concerned” or “not at all concerned” about contracting an STI (Table 7).

Table 7: Levels of concern about contracting an STI among single midlife men and women (Male n = 589; Female n = 588; N = 1177)

		How concerned are you about contracting a Sexually Transmitted Infection (STI)?			
		Very concerned % (N)	Somewhat concerned % (N)	Not very concerned % (N)	Not at all concerned % (N)
Male	40-44	15 (22)	29.3 (43)	36.7 (54)	19 (28)
	45-49	15.8 (23)	28.8 (42)	28.8 (42)	26.7 (39)
	50-54	17 (25)	27.9 (41)	29.9 (44)	25.2 (37)
	55-59	17.4 (26)	24.8 (37)	27.5 (41)	30.2 (45)
	Total	16.3 (96)	27.7 (163)	30.7 (181)	25.3 (149)
Female	40-44	20 (29)	25.5 (37)	24.8 (36)	29.7 (43)
	45-49	12.8 (19)	23.5 (35)	28.9 (43)	34.9 (52)
	50-54	25.9 (38)	19.7 (29)	27.2 (40)	27.2 (40)
	55-59	12.9 (19)	15 (22)	24.5 (36)	47.6 (70)
	Total	17.9 (105)	20.9 (123)	26.4 (155)	34.9 (205)

### Concern about STI and condom use

As shown in Table 8, single men and women who were more concerned about contracting an STI were more likely to use a condom at last PVI. For example, 50.0% of single midlife men and 39.3% of single midlife women who were “very concerned” about contracting an STI used a condom at last PVI compared to 27.4% of men and 23.9% of women who were “not at all concerned.”



Table 8: Levels of concern about condom use and condom use at last PVI among single midlife men and women. (Male n = 385; Female n = 441; N = 826)

Gender	Concern about STIs	Did you use a condom for penis-vagina intercourse?	
		Yes	No
Male	Very concerned	50 (29)	50 (29)
	Somewhat concerned	41.6 (47)	58.4 (66)
	Not very concerned	27.7 (33)	72.3 (86)
	Not at all concerned	27.4 (26)	72.6 (69)
	Total	35.1 (135)	64.9 (250)
Female	Very concerned	39.3 (33)	60.7 (51)
	Somewhat concerned	33.7 (31)	66.3 (61)
	Not very concerned	18.7 (23)	81.3 (100)
	Not at all concerned	23.9 (34)	76.1 (108)
	Total	27.4 (121)	72.6 (320)

## Conclusion

Epidemiological data indicates that the incidence of STI among the general population of older Canadians may be increasing. However, to date there has been little to no research investigating the STI behavioural risk of single sexually active midlife Canadians. Data from the *Trojan/SIECCAN Sexual Health at Midlife Study* demonstrate that many single midlife Canadians are at high risk for STI. Specifically, levels of condom use are low. As this report shows, in important respects, the behavioural risk for STI is higher among single midlife Canadians than it is for university students. Concern about STIs among single midlife Canadians is low and this appears to be contributing to their low levels of condom use. Together, these data clearly indicate a need to increase awareness of STI among single midlife Canadians and that greater efforts are required to promote condom use among sexually active single people aged 40 to 59.

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