

# Assessing the effect of the 'Could I have an STI?' interactive quiz hosted on the Play Safe website on young people's intentions to use condoms and test for STIs

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**Publication details:**

Commissioning Body: Centre for population Health, NSW Ministry of Health

**Publication Date:**

2017-01-01

**DOI:**

<https://doi.org/10.26190/5cb016cb4daf1>

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of tickets to 5SOS  
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Play Safe  
Community

NEW!



Could I have  
an STI?



Where can I  
get tested?

Find your nearest Doctor or Clinic



Myth vs Truth



Nurse Nettie

She's here to help.  
No question too awkward!

## **Acknowledgements**

This evaluation study was conducted as part of the Blood Borne Virus & STI Research, Intervention and Strategic Evaluation (BRISE) program, funded by the Centre for Population Health (NSW Ministry of Health), with the objective of informing the development of the *Play Safe* website managed by the NSW STI Programs Unit.

Thanks go to Gemma Hearnshaw, NSW STI Programs Unit, for her feedback on the report.

The analyses and interpretation of data presented in this report were undertaken independently from the implementing partner.

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## **Suggested citation:**

Adam, P. C. G., & de Wit, J. B. F. (2017). *Assessing the effect of the Could I have an STI? interactive quiz hosted on the Play Safe website on young people's intentions to use condoms and test for STIs*. Sydney: Centre for Social Research in Health, UNSW Sydney. <http://doi.org/10.26190/5cb016cb4daf1>

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# Executive summary

The Centre for Social Research in Health was commissioned to conduct an empirical evaluation of the effect of the *Could I have an STI?* interactive quiz hosted on the *Play Safe* website. Using data routinely collected through the quiz software during the fourteen first months of the intervention, the assessment mainly consisted of comparing quiz visitors' condom use and STI testing intentions after exposure to the intervention to their intentions at baseline. A significant effect of the intervention on intentions to test for STIs was observed among participants previously tested for STIs as well as non-tested participants. The effect of the intervention on intentions to use condoms appeared mainly on participants who were not using condoms consistently prior to being exposed to the intervention. Results also indicate that having had to think about one's sexual health-related intentions prior to receiving sexual health feedback could have made quiz visitors more receptive to the information and advice received through the interactive menu. Based on these findings, the *Could I have an STI?* quiz appears well equipped to motivate young people to use condoms and test for STIs. There would be a need for a follow-up with visitors over time to assess the extent to which their intentions to use condoms and test for STIs actually transforms into behaviour.

# Background

Young people in Australia are at high risk of contracting sexually transmissible infections (STIs) due to inconsistent usage of condoms and insufficient uptake of testing for STIs (Adam et al., 2011; 2014; 2017). Strengthening the sexual health of young people is a key priority with a range of sexual health promotion initiatives being implemented at national and state levels. During Youth Week in April 2014, the online initiative *Play Safe* was launched by the New South Wales STI Programs Unit (NSW STIPU) on behalf of the Centre for Population Health (NSW Ministry of Health) with the objective of promoting condom use and testing for STIs among adolescents and young adults in NSW. Building on the experience gained in previous sexual health promotion initiatives, *Play Safe* aims to comprehensively address the sexual health needs of young people. The *Play Safe* website offers information and advice about sexuality and sexual health as well as interactive tools to engage young people with sexual health issues. A key component of the *Play Safe* intervention is the *Could I have an STI?* interactive quiz. This quiz was developed through a collaboration between the sexual health promotion team at NSW STIPU and Dr Adam at the Centre for Social Research in Health (CSRH), based on results from previous research exploring the factors that shape young people's sexual health-related behaviour (Adam et al., 2011). Through the quiz, young visitors are invited to share their sexual health-related beliefs and practices. Using this information, the quiz software provides sexual health promotion advice tailored to the situation and needs of each visitor. Young people can receive tailored feedback on their personal risk of contracting an STI and on some (perceived) barriers that may prevent them from testing for STIs. Young people who express an intention to test for STIs as a result of their exposure to the intervention are encouraged to make an appointment with their general practitioner or to visit the testing services listed on the *Play Safe* website.

## The present study

CSRH was commissioned by the Centre for Population Health to provide an empirical evaluation of the *Could I have an STI?* interactive quiz. The evaluation consisted of assessing the extent to which the intervention delivered through the quiz can motivate young people to use condoms and test for STIs. Using data routinely collected through the quiz software, we compared behavioural intentions observed after exposure to the intervention with behavioural intentions assessed prior to exposure. Changes in behavioural intentions were expected to provide an indication of the effectiveness of the intervention component and inform future developments around the content of the *Play Safe* website.

# Methods

The *Could I have an STI?* interactive menu (Box 1) forms part of the *Play Safe* ongoing initiative and was assessed as a 'real-life' intervention.

## Box 1: The *Could I have an STI?* quiz

On the *Play Safe* website a banner provides direct access to the introduction page of the *Could I have an STI?* interactive quiz. After clicking on the button 'Take the quiz now', visitors start answering questions about their sexual lifestyle and practices, sexual health risks (including through sex without condoms) and intentions to test for STIs. This data were used to provide visitors with feedback on their personal risk of contracting an STI, including tailored advice regarding condom use and testing for STIs. Participants are subsequently asked to answer twelve questions on their views regarding testing for STIs. These questions allow each individual visitor to report potential individual, social and structural factors that may operate as (perceived) barriers to testing for STIs. The interactive software uses the information on potential existing barriers to provide participants with short messages that build on findings from research on barriers to testing among young people and proven behavioural change approaches. Overall, the automated system can deliver up to 40 sexual health promotion messages following a complex decisional algorithm that allows providing personalised information and advice according to the situation and needs of each individual visitor. At the end of the quiz, participants are asked about their intentions to use condoms and test for STIs. Those expressing an intention to test for STIs are encouraged to make an appointment with their GP or visit one of the testing clinics listed on the *Play Safe* website.

The interactive quiz can be accessed through the following link:

<https://playsafe.health.nsw.gov.au/could-i-have-sti>

## Procedures

The mechanism to support the evaluation was built in the interactive menu by the research team. Prior to receiving the intervention content, one quarter of visitors were randomly selected to answer questions about their intentions to use condoms and test for STIs (pre-intervention data). All participants were subsequently enrolled in the intervention and asked about their condom use and STI testing intentions at the end of the quiz (post-intervention data). For the purpose of evaluation, all visitors' data were routinely stored by the interactive menu software. This includes information on visitors' trajectories within the interactive menu and sexual messaging displayed as well as visitors' socio-demographic characteristics, their

sexual practices, condom use and sexual risk-taking, STI testing, barriers to and facilitators of testing for STIs, and intentions to use condoms and test for STIs.

## Measures

*Socio-demographics:* Participants were asked to report their gender, their age and area of residence.

*Sexuality and sexual health:* Participants reported whether they ever had oral, vaginal or anal sex (*yes/no*) and what their lifetime number of sex partners was (open question). The number of partners were recoded into a dichotomous variable (0-5 partners/ more than 5 partners).

Participants were asked whether they had had boyfriend/s or girlfriend/s and/or other types of partners (including hook-ups, friends with benefits) in the past 12 months. Depending on their situation, participants were then asked about their frequency of condom use with different types of partners. Data on the frequency of condom use with each type of partner were combined and recoded into an indicator of engagement in sexual intercourse without condoms with any partner/s in the past 12 months (*yes/no*). Lastly, participants were asked whether they had been tested for STIs (*yes/no*) and whether their last test was done in the past 12 months (*yes/no*).

*Behavioural intentions:* To assess intentions prior to exposure to the intervention, two questions were asked to a quarter of the participants, randomly selected by the quiz software. Participants reported on their intentions to use condoms (*'When you have sex in the future, do you intend to use condoms?'*) and their intentions to test for STIs (*'Do you intend to test for STIs in the future?'*), with answers to each question being provided on a 5-point scale (1 - *Definitely not* to 5 - *Definitely yes*). At the end of the quiz, all participants were asked about their intentions using similar questions: *'Based on the advice you received in this quiz, what are you planning next?'*. Participants then had to answer two questions: *'I intend to use condoms when I have sex in the future'* and *'I intend to test for STIs in the future'* with answers being provided on a 5-point scale (1 - *Definitely not* to 5 - *Definitely yes*).

## Eligibility

To be eligible for the present analyses, participants had to be aged 15 to 29 years, live in Australia, be sexually active, and have provided full evaluation data.

## Analyses

A first step in the analysis consisted of assessing whether data collected from participants who were invited to provide pre-intervention data on their behavioural intentions were representative of the full sample of eligible participants. This was achieved through comparing participants who provided pre-intervention intention data with those who did not in terms of age, gender, state of residence, lifetime number of partners, engagement in sexual intercourse without condoms in the past 12 months and having tested for STIs. Pearson Chi Squares were used to assess whether differences between the two groups were statistically significant.



The second step in the analysis consisted of assessing the effect of the interactive menu on participants' sexual health-related intentions. Paired t-tests were used to compare scores of behavioural intentions reported before and after exposure to the intervention. Analyses were conducted separately for intention to use condoms and intention to test for STIs among participants who had reported on their intentions prior to and after being exposed to the intervention. For intentions to test for STIs, we also assessed whether the intervention had a differential effect on participants who had not been tested for STIs prior to being exposed to the intervention compared to those who had already been tested. For intention to use condoms, we assessed whether there was a differential effect of the intervention on participants who used condoms prior to being exposed to the intervention compared to those who did not.

The third step in the analysis consisted of assessing potential differences in post-intervention scores of intentions between participants who were randomly selected to report on their intentions prior to the intervention and participants who did not answer such questions. We assessed whether the fact that some participants were invited to report on their intentions prior to being exposed to the intervention could have had an influence on their post-intervention intentions. This was achieved using a simple linear regression model where post-intervention intentions were the dependant variable and having reported behavioural intentions prior to being exposed to the intervention (*yes/no*) was treated as an independent variable.

## Ethics

As this was a real-life intervention rather than experimental research, no informed consent appeared at the commencement of the quiz. However, there was a disclaimer button on the first page of the quiz highlighting that anonymous data are routinely collected for evaluation research purpose, all of which are de-identified. The protocol was approved by the Human Research Ethics Committee of the NSW Health South Eastern Sydney Local Health District (HREC ref no: 14/152 LNR/14/POWH/371).

# Results

## Sample

A total of 1,525 entries were recorded in the interactive menu database between 31/03/2014 and 20/05/2015. Of these 1,525 entries, 888 met the eligibility criteria and were retained for the present analyses. Participants' characteristics are presented in Table 1.

Of the 888 eligible participants, one quarter (n=211, 23.8%) was randomly selected to answer questions about their intentions to use condoms and test for STIs prior to being exposed to the intervention (pre-intervention on baseline data). Participants who were asked to provide pre-intervention data on their sexual health-related intentions were compared to those who were not asked to provide these data. As can be seen in Table 1, there were no differences between the two groups in terms of age, gender, NSW residency, lifetime number of sex partners and reports of sexual intercourse without condoms in the past 12 months. While the proportion of participants who had been tested for STIs was slightly lower among participants who provided pre-intervention data on intentions compared to those who did not, the difference was not statistically significant.

**Table 1: Sample characteristics**

	Overall (n = 888)	Participants with pre- intervention data on intentions (n = 211)	Participants without pre- intervention data on intentions (n = 677)	Pearson Chi- square
Being 20 years and older	47.2%	44.7%	48.8%	.405
Female gender	65.3%	65.9%	65.1%	.844
Living in NSW	82.8%	82.5%	82.9%	.893
More than 5 partners	47.1%	44.2%	48.1%	.344
Sexual intercourse without condoms in the past 12 months	86.4%	87.6%	86.1%	.688
Ever tested for STIs	27.5%	23.7%	28.7%	.158

## Effect of the intervention on intentions to use condoms

Pre- and post-intervention data on intentions to use condoms are presented in Table 2. As can be seen, participants' intention to use condoms was significantly higher after exposure to the intervention than as measured prior to the intervention (Mean = 3.64 versus 3.91, respectively, *paired sample test*,  $p = .004$ ). The increase in intention to use condoms was, however, mostly observed among participants who did not always use condoms prior to being exposed to the intervention (Mean = 3.50 versus 3.80). Conversely, pre- and post-intervention scores of intentions were similar among participants who reported using condoms consistently (Mean = 4.62 versus 4.69).

**Table 2: Intentions to use condoms prior to and after exposure to the intervention (n = 211)**

Condom use	Pre-intervention intentions			Post intervention intentions		
	M	Mdn	SD	M	Mdn	SD
- Consistent condom use	4.62	5.00	.87	4.69	5.00	.85
- Inconsistent condom use	3.50	4.00	1.20	3.80	4.00	1.34
Sub-total (all condom use)	3.64	4.00	1.22	3.91	4.00	1.32

Note: M= mean, Mdn = median, SD= standard deviation.

Post-intervention scores of intentions to use condoms were, however, lower among participants who did not provide pre-intervention data on their intentions than among those who did (Mean = 3.61 versus 3.91,  $p < .001$ ). A linear regression was calculated to predict post-intervention scores of intentions to use condoms based on whether participants had been asked to report on their intentions to use condoms prior to being exposed to the intervention content. A significant regression equation was found ( $F(1,886)=10.404$ ,  $p = .001$ ,  $R^2 = .01$ ) with post intervention scores of intention to use condoms increasing by .342 when participants had been asked (to think) about their intentions at baseline.

## Effect of the intervention on intentions to test for STIs

Pre- and post-intervention data on intentions to test for STIs are presented in Table 3. As can be seen, participants' intention to test for STIs were significantly higher after exposure to the intervention than prior to the intervention (Mean = 3.76 versus 4.15, respectively, *paired sample test*,  $p=.000$ ). Increases in intentions to test were observed both among the participants who had never tested for STIs and those who had tested prior to the intervention.

**Table 3: Intentions to test for STIs prior to and after exposure to the intervention (n = 211)**

STI testing status	Pre-intervention intentions			Post intervention intentions		
	M	Mdn	SD	M	Mdn	SD
- Never tested for STIs	3.63	4.00	1.20	4.01	4.00	1.24
- Ever tested for STIs	4.18	4.50	1.08	4.60	5.00	.64
Sub-total (all STI testing status)	3.76	4.00	1.19	4.15	5.00	1.16

Note: M = mean, Mdn = median, SD = standard deviation.

Post-intervention scores of intention to test for STIs were, however, lower among participants who did not provide pre-intervention data on their intentions than among those who did (Mean = 3.73 versus 4.15,  $p < .001$ ). A linear regression was calculated to predict post-intervention intentions based on whether participants had been asked to report on their intentions prior to being exposed to the intervention. A significant regression equation was found ( $F(1,886)=17.679$ ,  $p < .001$ ,  $R^2 = .02$ ) with post intervention scores of intention to test for STIs increasing by .416 when participants had been asked (to think) about their intentions at baseline.

# Discussion

During 14 months of intervention, 1,525 entries to the database were routinely collected. Of these 1,525 entries, 888 were eligible participants and were retained for the analyses. On average, participants were 20 years old. Most sexually active participants had had sexual intercourse without condoms in the past 12 months. Perceived barriers to testing for STIs were prevalent among visitors and only a quarter had ever tested for STIs. This suggests that the intervention was reaching its target audience and was able to engage with a population of young people in need of sexual health advice.

The assessment was conducted on pre- and post-intervention data on sexual-related intentions provided by 211 visitors. A comparison of pre- and post-intervention data found a significant effect of the quiz on both intentions to use condoms and intentions to test for STIs. The effect of the intervention on intentions to test could be observed among both non-tested participants and participants previously tested for STIs. The effect of the intervention on intentions to use condoms appeared mainly on participants who were not using condoms consistently prior to the intervention. The absence of significant intervention effect on intentions to use condoms among the other participants could be due to the fact that they already had strong intentions to use condoms prior to their exposure to the intervention.

Results also indicate that having had to respond to questions on condom use and STI testing intentions prior to being exposed to the intervention had a positive effect on post-intervention intentions. At first sight, this could be viewed as a potential response bias, with participants invited to respond for a second time to questions on their intentions providing socially desirable answers. There may, however, be other important interpretations to consider. Having had to think about one's sexual health-related intentions prior to receiving sexual health feedback could have made visitors more receptive to the information and advice received. This may well explain why after exposure, higher levels of intention to adopt the recommended behaviours were mostly observed among participants who had to report on their intention prior to being exposed to the intervention.

The assessment has several limitations. As this was a real life intervention, our assessment was based on pre- and post-intervention comparisons among a limited number of participants. Analyses should be replicated on a larger sample of visitors to fully validate the results presented in this paper. The evaluation study only measured the effect of the intervention on participants' intentions towards testing and using condoms. As there is generally a gap between intentions and behaviour, there would be a need for a follow-up with visitors over time to assess the extent to which their intentions to use condoms and test for STIs actually transform into behaviour.

Despite these limitations, results show encouraging preliminary signs of effectiveness for the *Could I have an STI?* quiz. The interactive menu appears well equipped to motivate young people to use condoms and test for STIs. A few recommendations to further improve the intervention include increasing reach, ensuring similar levels of engagement of both male and female young people and asking young people about their plans and intentions regarding condom use and testing for STIs prior to delivering the intervention content. This strategy could further increase the effectiveness of the intervention.

# References

Adam, P., de Wit, J., Hermans, J., Story, L., Edwards, B., Murray, C., & Bourne, C. (2011). Understanding barriers to STI testing among young people: results from the online survey 'Getting Down To it' (Monograph 2/2011). Sydney: National Centre in HIV Social Research, The University of New South Wales.

Adam, P. C. G., de Wit, J. B. F., Treloar, C., Shepherd, B., Duck, T., Byron, P., Bourne, C., Murray, C., Welsby, D., & Holden, J. (2014). Towards an online periodic survey of sexual health among young people in Australia (Monograph 8/2014). Sydney: Centre for Social Research in Health, UNSW Australia.

Adam, P., Schippers, M., Schmidt, H., Modderman, K., Slattery, C., Estoesta, J., Murray, C., Hearnshaw, G., Murphy, D., & de Wit, J. (2017). It's Your Love Life: a new periodic survey on sexual health among young people in NSW. Sydney: Centre for Social Research in Health, UNSW Sydney.