

Get Tested Why Not? A Novel Approach to Internet-based Chlamydia and Gonorrhoea Testing in Canada

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ABSTRACT

OBJECTIVE: The objective of the *Get Tested Why Not* campaign is to increase access to chlamydia and gonorrhoea testing and sexual health information, with specific focus on youth.

PARTICIPANTS: Individuals between the ages of 15-29 are most affected by chlamydia and gonorrhoea infections in Ottawa and were identified as the target population. Youth from the target population were engaged in the development and launch of the campaign.

SETTING: Development of the campaign began in 2009 and led to a launch on March 21, 2011. Social media promotion as well as traditional advertising approaches developed awareness of the campaign within the target population.

INTERVENTION: The campaign consists of a bilingual, youth-friendly website and texting service. After assessing appropriateness of testing, clients can download a requisition form for urine-based chlamydia and gonorrhoea testing and submit a sample at one of 26 laboratories across Ottawa.

OUTCOMES: During year 1 of the campaign, there were 13,385 website hits and 104 specimens submitted for chlamydia and gonorrhoea testing. The majority (57.6%, n=60) of requisitions were submitted by members of the target population (age 15-29). Of the requisitions submitted, 95 (91.3%) were negative, 4 (3.9%) were positive and 5 (4.8%) were cancelled due to lab errors.

CONCLUSION: The campaign is reaching the target population and has demonstrated a positive impact on knowledge and intended behaviours of users. The use of technology has expanded testing options, thereby potentially broadening Ottawa Public Health's reach to clients who may be less likely to test through traditional testing approaches.

KEY WORDS: Sexually transmitted diseases; internet; health promotion; adolescent; public health

La traduction du résumé se trouve à la fin de l'article.

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During 2000-2010, the incidence rates of chlamydia and gonorrhoea infections in Ottawa doubled.¹ This trend is consistent with urban populations across Ontario; however, in 2010, Ottawa's rates of chlamydia and gonorrhoea were higher than the average of the other urban centres in the province (excluding Toronto).² Ottawa Public Health is mandated by the *Health Protection and Promotion Act* to promote healthy sexuality and reduce the transmission and burden of sexually transmitted infections (STIs) in Ottawa's population. Screening of high-risk populations is critical because 70% of females and 50% of males are asymptomatic during a chlamydia infection and therefore may be unaware that they are contributing to ongoing STI transmission.³ Chlamydia and gonorrhoea have significant public health implications due to major negative sequelae of these infections that include pelvic inflammatory disease, ectopic pregnancy, infertility, chronic pelvic pain in women and epididymitis and orchitis in men. In addition, Reiter's syndrome may manifest as a complication in both sexes.⁴ A formal literature review was conducted in August 2009 including the following databases: Academic Search Premier, CINAHL, MEDLINE, Cochrane Database of Systematic Review, and Ovid. The literature review yielded 128 scholarly peer-reviewed journal articles, 18 North American youth surveys, and a Cochrane systematic review related to youth sexual health promotion and web-based interventions. The findings from the Cochrane review support the use of technology in sexual health promotion, and demonstrate a moderate positive effect when compared with traditional health

promotion strategies.⁵ Survey findings also capture the commonly reported barriers that youth face in accessing traditional sexual health services and information,⁶ which may be addressed by the use of technology. In addition, the technology-based STI prevention practices of other North American public health departments were also reviewed as examples to assist Ottawa Public Health in designing the technical components of the campaign website and texting service.

In response to the escalating rates of chlamydia and gonorrhoea in Ottawa and the evidence presented in the literature, Ottawa Public Health launched a technology-based testing campaign called *Get Tested Why Not*. The two main objectives of the campaign were to 1) increase youth access to chlamydia and gonorrhoea testing, and 2) increase youth access to sexual health information.

PARTICIPANTS, SETTING AND INTERVENTION

Target population

Local epidemiological data revealed that youth between the ages of 15 and 29 are disproportionately affected by chlamydia and gonorrhoea.

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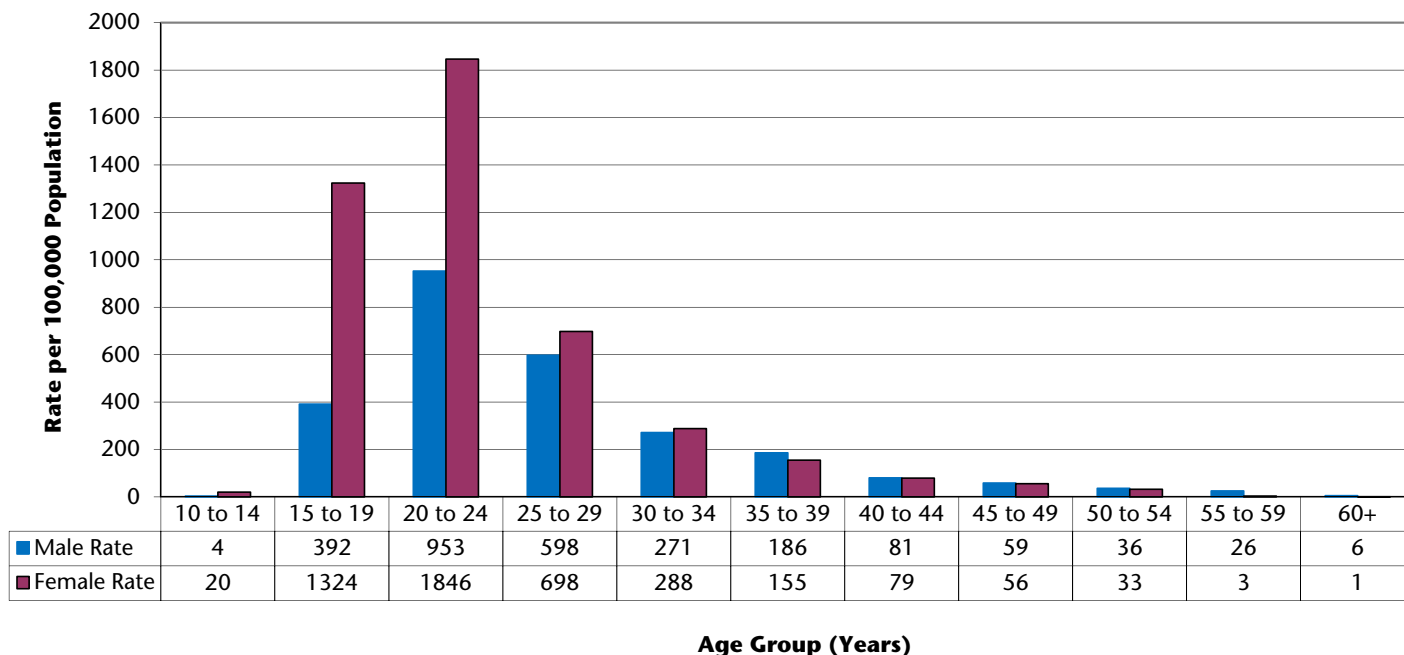
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Conflict of Interest: None to declare.

Figure 1. Crude incidence rates of chlamydia by age group and sex, City of Ottawa, 2010



Source: integrated Public Health Information System (iPHIS), Ontario Ministry of Health and Long-Term Care. Data extracted January 14, 2013 by Epidemiology Section, Ottawa Public Health.

orrhea infections, representing 81.8% and 73.2% of case reports respectively within Ottawa (Figure 1).⁷ As a result, this population was selected as the target population for the intervention.

Setting

Ottawa Public Health engaged youth throughout the development and launch of the campaign by recruiting a Youth Advisory Group (YAG). The YAG was comprised of a diverse group of 28 Ottawa youth from the target population. Youth facilitators employed by Ottawa Public Health recruited YAG members from malls and university campuses and led several focus groups with the YAG in conjunction with Ottawa Public Health staff members. Focus-group participants were divided into three age groups (14-17, 18-24, 25-29) and were given a \$20.00 honorarium or credit for volunteer hours as compensation. A sample of focus-group questions and summary of responses is included in Table 1. Once the campaign was launched, youth facilitators also played a key role in promoting the campaign to their peers at community outreach events.

Development of the *Get Tested Why Not* campaign began in 2009 and the campaign was launched on March 21, 2011. The campaign utilizes technology in the form of a bilingual, youth-friendly website (www.gettestedwhynot.ca) and a sexual health information texting service called *Get Texted*. The website was designed to support the campaign objective of increasing access to chlamydia and gonorrhea testing by featuring a requisition form that is available to download and print, and which can then be submitted to private laboratories across Ottawa. Ottawa Public Health is the first health unit in Canada to provide a downloadable requisition form of this nature.

Implementing the unique approach of the *Get Tested Why Not* campaign included consultations with the College of Physicians and Surgeons of Ontario and Ottawa Public Health’s legal counsel, epidemiologists, corporate communication and information tech-

nology departments. Three new partnerships were developed between Ottawa Public Health and private laboratories across the city, to offer clients a variety of choices in testing locations. In total, partnership with the local laboratories resulted in 26 new sites that accept the campaign lab requisition form.

The use of technology and social media played an important role in the campaign advertising and promotion. The use of social media websites such as Facebook and Twitter were used to build awareness about the campaign within the target population. Facebook advertising was purchased for the first four weeks of the campaign which was targeted at youth 15-29 years old who lived in Ottawa. In addition, the campaign was regularly promoted on the Ottawa Public Health Facebook and Twitter accounts as well as the Sexual Health Centre’s homepage. Traditional advertising methods such as transit advertising, print posters, business cards and condom wallets were also employed to ensure that the campaign had a visual presence and reached as many youth as possible.

Public health intervention

From the website homepage menu, users can access information about chlamydia and gonorrhea, a brief risk assessment quiz, frequently asked questions about sexual health, the *Get Texted* service, and a downloadable requisition form for urine-based chlamydia and gonorrhea testing. Table 2 provides a detailed summary of the website content.

Users are able to easily assess their chlamydia and gonorrhea risk and determine their suitability for testing. Those who are symptomatic are advised to seek assessment with their regular health care provider or at Ottawa Public Health’s Sexual Health Centre. Clients are advised that they will only be contacted if they test positive, and will receive follow-up by an Ottawa Public Health nurse if a positive test result is reported. Clients can download the requisition form and submit a sample to any of the partner laboratories

Table 1. Sample of YAG Focus-group Questions and Summary of Responses

Focus-group Questions	Age Group 14-17 Summary of Responses	Age Group 18-24 Summary of Responses	Age Group 25-29 Summary of Responses	How Youth Responses Were Integrated Into Campaign by Ottawa Public Health
Website				
1. What suggestions do you have for a name for the website?	Sexuality and reality	Testing is easy Testing why not? Test with ease	What's up down there? It's easy No more STI stigma	<ul style="list-style-type: none"> Website address that was adopted www.gettestedwhynot.ca
2. What are your suggestions for the "look and feel" of the website?	Videos Colourful Stories	Colourful Minimal text Easy to navigate	Professional Easy to navigate Good graphics	<ul style="list-style-type: none"> Campaign colours are yellow and orange. Home page and menu bar are easy to navigate. Urine cup graphic used for campaign logo. Website has a professional yet youth-friendly tone.
3. What are the features you would like to see on the website?	Pictures Search bar Bilingual option	New facts and statistics Map for labs Risk quiz	Hide button for privacy Clear layout Interactive	<ul style="list-style-type: none"> Website is fully bilingual. Lab locator feature incorporated. Risk assessment quiz incorporated. Hide button incorporated. Scrolling text marquee with facts and statistics incorporated.
4. How do you think we should promote the website?	Give out information in schools Facebook	Posters and cards Catchy website name Mascots	Catchy website name Activities targeted to youth Social media	<ul style="list-style-type: none"> Promoted at high school health fairs and sexual health clinics. Community outreach activities focused on youth events. Incorporated Facebook advertising and social media messaging into advertising and promotion plan.
Texting Service				
1. What suggestions do you have for the name of the text messaging service?	Dr. Text Text for health	Get texted Textual Health Text in the city	Info text STI info STI text	<ul style="list-style-type: none"> Texting service was called Get Texted.
2. Which topics about sexual health would you like to see covered on the text messaging service?	STIs Pregnancy Birth control	STIs Testing Condoms	STIs Testing Condoms	<ul style="list-style-type: none"> Topics for Get Texted menu include: STIs/testing Condoms Pregnancy Clinics
3. How do you think we should promote the text messaging service?	Bus ads Malls and movie theatres Free promotional items	Radio commercials Free promotional items Facebook	Buses Billboards Newspapers	<ul style="list-style-type: none"> Advertising included Facebook, bus ads, newspaper ads, print posters and promotional items such as Frisbees and condom wallets.

across the city or to Ottawa Public Health's Sexual Health Centre for testing.

The website also contains youth-friendly features that the YAG recommended, such as a mapping function that allows users to easily identify the laboratory nearest to them using Google maps, a floating "hide" button that lets users quickly exit the website for privacy reasons, and a scrolling text marquee with facts and statistics about sexual health. In addition to the website, the *Get Texted* service allows users to text an automated system to receive information on their mobile devices about sexual health and local resources available. This phone-based SMS service is accessible 24 hours per day.

The campaign was evaluated 6 months and 12 months post-implementation using both quantitative and qualitative methods. Quantitative data were collected from sources including Google analytics, monthly texting reports, the Ottawa Public Health Sexual Health Centre's client database, and the integrated Public Health Information System (iPHIS) used to record reportable communicable diseases in the Province of Ontario. Quantitative data included the number of website hits, website traffic referral sources, number of texting hits, number of requisitions submitted, basic demographic information about individuals who presented for testing, the number of positive and negative chlamydia and gonorrhoea results, and number of sexual partners (contacts) for positive cases. Qualitative data were collected using an online survey completed by website visitors, which included non-identifying demographic

information, referral sources, and effects of the campaign on individual knowledge and intended behaviour change.

RESULTS

During the first year of implementation, from March 21, 2011 to March 21, 2012, there were a total of 13,385 website hits, 82% (n=11,050) of which were unique visitors. On average, the website received 732 hits per month. The majority of visitors (36.6%, n=4,044) were referred from the OPH homepage, followed by 27.6% (n=3,049) from search engines, 18.8% (n=2,077) from direct visits, 8.1% (n=895) from Facebook, and 8.9% (n=983) from all other sources. On average, users had 2.88 page views and spent on average 2.16 minutes on the website. The texting service received 139 English and 14 French hits to the initial texting menu and 392 and 29 hits, respectively, to additional menu items. Quick response (QR) codes were used on a variety of campaign materials to provide users with instant access to the campaign website. The initial version of the QR code was not trackable; however in year 2 of the campaign, a trackable version was implemented, meaning that the number of times a QR code was scanned from print material and linked the user to the website could now be determined.

A total of 104 requisitions were submitted for chlamydia and gonorrhoea testing. The majority (57.6%, n=60) of the requisitions were submitted by people from within the target population. Within the target population, the age distribution of testing was as follows: 30% (n=18) 15-19 years old, 45% (n=27) 20-24 years old, and

Table 2. Summary of Get Tested Why Not Website Content

Website Menu Component	Description	Links
Chlamydia	Basic chlamydia information.	STI risk assessment quiz Ottawa Public Health's Healthy Sexuality website (Chlamydia)
Gonorrhea	Basic gonorrhea information.	STI risk assessment quiz Ottawa Public Health's Healthy Sexuality website (Gonorrhea)
I want to take the test now	Assessment of suitability for testing and consent.	Sexual Health Centre (for symptomatic clients) STI risk assessment quiz I want to take the test now
About the test	Outlines testing process in 3 steps.	Find a lab function STI risk assessment quiz
Get Texted	Instructions on how to access Get Texted service on a mobile device. Summary of texting topics. Automatic link.	Ottawa Public Health's Healthy Sexuality website (STI Index)
Other STIs	Automatic link.	Ottawa Public Health's Healthy Sexuality website (Birth Control Index)
Birth control	Automatic link.	Ottawa Public Health's Healthy Sexuality homepage
Sexual Health Centre Resources	Contact information. Glossary.	Find a lab function Partner websites Sexual health resource websites
FAQ	Frequently asked questions.	Ottawa Public Health's Healthy Sexuality homepage Condom demonstration video
Sex it Smart	Automatic link.	Partner websites www.sexitsmart.ca Ottawa Public Health's youth condom campaign

25% (n=15) 25-29 years old. The gender of clients 15-29 years of age was 53% (n=32) male and 47% (n=28) female, however in the 30 and older population, the gender of clients who completed testing was 79.5% (n=35) male and 20.5% (n=9) female. Based on the total number of requisitions submitted during the first year of the campaign, 91.3% (n=95) were negative, 3.8% (n=4) were positive for chlamydia, 4.8% (n=5) were cancelled due to partner lab errors and 0 gonorrhea cases were detected. All four of the chlamydia cases detected were asymptomatic at the time of testing. As a result of the initial positive cases, contact tracing was completed with five sexual partners by a Public Health Nurse. All clients affected by lab errors were notified by a phone call and encouraged to retest.

A total of 148 surveys (1.3% of website visitors) were completed during the first year of the campaign. Of the 106 respondents who provided their gender, 32% (n=34) were male, 61.3% (n=65) were female and 6.7% (n=7) were transgender. A total of 43% (n=64) of survey participants were within the target population of ages 15-29. As part of the survey, participants were asked what they have learned from the website and were able to select more than one response. The majority of respondents (51%, n=75) stated that they learned where they could get tested for chlamydia and gonorrhea, 30% (n=44) learned about their risk of contracting chlamydia and gonorrhea, and 26% (n=38) learned about other STIs. Survey participants were also asked if they would change their behaviour as a result of what they learned on the website. Fifty-three percent (n=78) of survey respondents reported that they would change one or more behaviours as a result of visiting the website. When asked about what actions they would undertake, 31% (n=46) stated they would ask their partner to get tested, 30% (n=44) stated they would increase the frequency of STI testing, and 24% (n=35) stated they would use condoms more often. When survey participants were asked how they heard about the campaign, 18% (n=27) identified word of mouth, 9% (n=13) social media, 14% (n=21) internet, 22% (n=33) other (newspaper, media releases, e-mail list serve), and the remaining 37% (n=55) indicated transit advertising, school, medical clinic, and community events.

DISCUSSION

As part of Ottawa Public Health's broader sexual health strategy, the *Get Tested Why Not* campaign has demonstrated that utilization

of an online requisition form and new health promotion technologies can increase access to chlamydia and gonorrhea testing and have a positive effect on the knowledge and intended behaviours of youth in an urban population. Moreover, the downloadable requisition form reduced several commonly reported barriers to testing, including a lack of a primary care provider, wait times for service provision, discomfort about discussing STIs with health care providers, and confidentiality concerns.^{6,8,9} As a result of the campaign, there are now significantly more access points in the city for chlamydia and gonorrhea testing which have been utilized and resulted in detecting asymptomatic chlamydia infections. The expansion in testing options thereby potentially broadens Ottawa Public Health's reach to clients who may be less likely to test using traditional sexual health or primary care avenues.

The campaign has faced some challenges, particularly in the areas of evaluation and promotion. The qualitative data derived from the website survey was only answered by 1.3% of unique visitors; meaning the results, although promising, cannot be generalized to all website users. There has also been a lack of client feedback regarding the client's testing experience as the four positive cases that were identified and treated declined to participate in a post-treatment survey. In year two of the campaign, client feedback has been improved by offering clients the option of calling a Public Health Nurse three weeks post-test to confirm negative results. The nurse conducts a brief phone survey to assess clients' satisfaction with the service and learn how they heard about the campaign. Ottawa Public Health is exploring options that will provide more useful data about the characteristics of the website and online testing service users, such as a survey with incentives and geomapping of clients' postal codes. It is interesting to note that gender distribution of clients within the target population was fairly even, however in the age group 30 and older, it was predominantly males. This finding supports the conclusion that men have a high acceptability of online chlamydia and gonorrhea testing.¹⁰ Further research is needed not only to understand the effectiveness and outcomes of online STI testing in the youth and adult populations, but also to determine how to influence uptake through traditional and non-traditional advertising and promotion.

Advertising and promotion of the campaign was limited by budgetary restraints. Beyond the launch of the campaign, funding

for advertising has been minimal, which may have contributed to a less-than-ideal awareness of the campaign in the target population and underutilization of services. The *Get Texted* service generally only receives hits when it is heavily promoted during a community outreach event, which may indicate that youth are simply not aware of the service. It is also important to consider that youth may prefer a more dynamic texting service that is conversational in nature instead of an automated one-way service.⁸ Ottawa Public Health continues to seek opportunities to promote the campaign in the community with social media, primary care providers, and partner organizations.

From a service perspective, Ottawa Public Health is working with community laboratory partners to prevent lab errors whenever possible by offering ongoing training and updates about the campaign. The majority of errors can be attributed to missing client information on the requisition, which is more likely to occur when a health insurance card is not required for testing or when clients are completing their own requisitions.

Ottawa Public Health is building on their successes with online sexual health promotion by launching a new youth condom campaign (www.sexitsmart.ca) as a micro site of the *Get Tested Why Not* website. The mobile friendly *Sex it Smart* website offers access to free condoms in Ottawa through the use of a condom locator, and options for residents to order condoms by mail and community agencies to pick up large-volume condom orders at the Sexual Health Centre. Both campaigns illustrate how traditional public health practices such as STI testing and condom distribution can be reoriented with technology to reach target populations.

The *Get Tested Why Not* campaign demonstrates the advantages and challenges of embracing technology into the evolving practice of online STI testing and sexual health promotion. The campaign provides a model for health organizations that utilizes a client-centred approach which may be applied to a variety of infections and at-risk populations.

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RÉSUMÉ

OBJECTIF : La campagne « Se faire tester : Pourquoi pas? » vise à élargir l'accès au dépistage et à l'information de santé sexuelle sur la chlamydia et la gonorrhée; elle s'adresse particulièrement aux jeunes.

PARTICIPANTS : Les personnes de 15 à 29 ans, qui sont les plus touchées par les infections à chlamydia et la gonorrhée à Ottawa, ont été désignées comme étant la population cible. Des jeunes de la population cible ont participé à l'élaboration et au lancement de la campagne.

LIEU : L'élaboration de la campagne a commencé en 2009, et son lancement a eu lieu le 21 mars 2011. Des activités de promotion dans les médias sociaux et des démarches publicitaires classiques l'ont fait connaître au sein de la population cible.

INTERVENTION : La campagne comprend un site Web bilingue adapté aux jeunes et un service de messagerie texte. Après avoir déterminé s'ils devraient se faire tester, les clients peuvent télécharger un formulaire de demande de dépistage de la chlamydia et de la gonorrhée et envoyer un échantillon d'urine à l'un de 26 laboratoires participants à Ottawa.

RÉSULTATS : Durant l'an 1 de la campagne, il y a eu 13 385 accès sur le site Web, et 104 échantillons ont été envoyés pour dépister la chlamydia et la gonorrhée. La majorité des demandes (57,6 %, n=60) ont été présentées par des membres de la population cible (15-29 ans). Sur les échantillons envoyés, 95 (91,3 %) étaient négatifs, 4 (3,9 %) étaient positifs et 5 (4,8 %) ont été annulés en raison d'erreurs de laboratoire.

CONCLUSION : La campagne atteint la population cible et a manifestement un impact positif sur les connaissances des utilisateurs et sur leurs intentions de se comporter. Le recours à la technologie accroît les options de dépistage, ce qui élargit potentiellement l'influence de Santé publique Ottawa auprès d'une clientèle moins susceptible de se faire dépister par les moyens classiques.

MOTS CLÉS : maladies sexuellement transmissibles; Internet; promotion de la santé; adolescent; santé publique