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Online Syphilis Testing—Confidential and Convenient

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Objective: **In response to the current syphilis epidemic among men who have sex with men, the San Francisco Department of Public Health sought to increase syphilis testing by offering testing in nonclinical settings.**

Goal: **The goal of this study was to collaborate with a community-based organization, Internet Sexuality Information Services, Inc. (ISIS), to design an innovative, confidential, online testing service for syphilis.**

Study: **The service, called STDTest.org, was launched in June 2003. The web site allows people to print out a laboratory requisition slip, have their blood drawn, and receive their test results online.**

Results: **During the first year, 218 tests were performed and 13 persons had reactive serologies. Six patients were diagnosed with a new syphilis infection and treated.**

Conclusions: **Online syphilis testing offers a free and convenient alternative to getting tested at the San Francisco municipal sexually transmitted disease clinic and an additional means for detecting syphilis cases.**

BETWEEN 1998 AND 2002, THE number of early syphilis cases in San Francisco increased from 41 to 495, with the majority of these new infections (88% in 2002) occurring among men who have sex with men (MSM).[1] These men increasingly report using the Internet to meet sex partners; in 2003, 40% of San Francisco MSM early syphilis cases used the Internet to meet sex partners compared with only 19% in 2000.[1–3] MSM who use the Internet to seek out sex partners are also likely to use the Internet to search for information on sexually transmitted infections (STIs).[4] This points to a compelling need to reach MSM Internet users with innovative, online STI prevention information, as well as easily available testing and partner notification tools.

With this in mind, Internet Sexuality Information Services, Inc. (ISIS), a community-based organization (CBO), and the San Francisco Department of Public Health (SFDPH), STD Prevention and Control Services collaborated to develop STDTest.org. STDTest.org was launched in June 2003 simultaneously with a new web site for the municipal sexually transmitted disease (STD) clinic after 5 months of development. The web site allows San Francisco area residents to request a syphilis test online and have the STD controller, a licensed physician, order the test. We report on the development and the methodology of STDTest.org. We also summarize the utilization and syphilis case detection during the first year of this service.

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Materials and Methods

Web Site Content

All material, both content and imagery, was written and developed by an ISIS health educator and reviewed and approved by a committee of doctors, nurses and nurse practitioners, and other public health professionals, as well as members from the San Francisco community (youth, gay men, and residents of various ethnic backgrounds). The web site was developed so that staff at SFDPH can easily update the site to remain current.

Web Site Design

Navigational maps were drawn up by the ISIS web site designer/architect and approved by a committee of SFDPH staff and community members. A number of options for the home page were also shown to the committee for approval. Photographs were selected from large archival services and submitted for approval before licensing. We launched STDTest.org on the health department web site to increase credibility for potential users. The testing service also went through a β period in which community members were asked to complete the online testing process and then give feedback to the developers about their experience.

Web Site Database and Security

Information entered into the online laboratory requisitions is stored in a database that sits outside the STD program firewall. In addition to saving the names and locating information for patients ordering tests, the database also stores test results to be viewed by anonymous ID number. There is no linkage between the names in the database and the test results; the only place the names appear with the anonymous ID numbers is on the printed laboratory slip. These ID numbers are reported to the STD program by the laboratory and recorded in the STD program's master database inside the firewall. Names and locating information are erased from the database each day when the new test results are added. Persons using the site are informed that their names and locating information are temporarily being stored outside the firewall, and that they should not use the site if they are concerned about confidentiality.

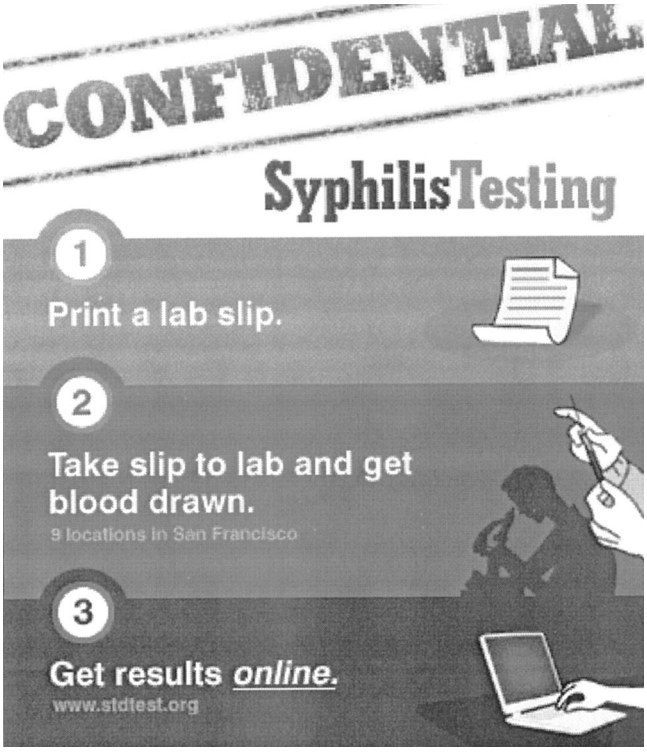

Fig. 1. Pop up at STDTest.org.

Fig. 2. Banner ad on gay.com

Web Site Testing Procedure

After going to the web site, STDTest.org, a San Francisco resident prints the completed laboratory requisition form and takes it to the nearest participating private laboratory in San Francisco to have his or her blood drawn. As stated previously, the test is ordered by the STD controller. Test results are retrieved online using a unique identifier generated by the system. If the results are positive, the person tested is directed to a content area where they can obtain current information about syphilis, guidance for how to tell his or her partner(s) about the disease, and information about both public and private treatment options. In addition, they are notified that a staff person from SFDPH will contact them to assure appropriate care and treatment.

Tracking Web Site Use

The SFDPH developers send weekly web visitor reports to the STD program staff, who review number of tests performed, results, and number of results viewed online by the patient. Complete reports are then shared with all interested parties.

Web Site Marketing

ISIS staff implemented online social marketing in the form of banner ads (Fig. 1) on web sites commonly used by MSM in San Francisco. ISIS also coordinated with another local CBO to add STDTest.org to an ongoing print campaign (bus posters, billboards, palm cards, and so on).

Results

On average, the web site received 544 visitors each week (minimum 52, maximum 1914), 12 laboratory requisition forms were downloaded (minimum 1, maximum 36), and 4 people had blood drawn (minimum 1, maximum 10). Between June 9, 2003, and May 31, 2004, there were 28,272 web site visits, 659 (2.3% of web site visits) laboratory requisition forms downloaded, 218 (33.1% of downloaded forms) syphilis tests performed, and 13 reactive rapid plasma reagin serologies detected. Confirmatory testing (TPPA) and interviews by health department staff determined that 6 of these were new infections, an overall positivity of 2.8% (6 of 218). Five (2.3%) of the confirmed cases had early syphilis and 1 had late latent syphilis. All syphilis cases were followed up by health department staff and treated.

To evaluate the community response to STDTest.org, the STD services staff collaborated with a local HIV prevention organization to conduct brief surveys in predominantly gay neighborhoods and venues. Between September 2003 and January 2004, 542 complete surveys about STDTest.org were collected from gay and bisexual men. Of the 21% of MSM who had heard about STDTest.org, the majority (93%) did not use the web site. The main reason (32%) given for not using the web site was that they did not need the test.

Discussion

The 2.3% yield of early syphilis infections detected through STDTest.org was similar to syphilis screening positivity at both the municipal STD clinic and the new gay men's health center. In 2003, 3.0% of gay and bisexual men tested at the municipal STD were diagnosed with early syphilis and, in the first year of operation (July 2003 to June 2004), early syphilis was detected in 2.2% of men tested at the gay men's health center.[5,6]

Reason for testing was not collected systematically from all web site users. However, anecdotal reports from health department staff who interviewed persons who tested positive through STDTest.org suggest that the program provided a convenient alternative to persons who were reluctant or too busy to come into the STD clinic. Several men who tested positive did have symptoms and

had gone online to seek information on the STD clinic web site. After seeing pictures of syphilis symptoms, they were able to click through to STDTest.org and complete the online testing process in a timely fashion. In the absence of STDTest.org, one might assume that these men may have sought testing through traditional sources. However, conversations with these men indicated that they would have delayed testing as a result of the long wait times and limited hours of the STD clinic.

More social marketing is needed to increase awareness of this unique service, especially among gay and bisexual men. Additional evaluation of this project is also needed to determine why only 30% of people who downloaded laboratory requisition slips went to a laboratory to have blood drawn. Many hypotheses have been offered, including procrastination, curiosity about service without intent to use, fear of blood draw, confusion about process, and concerns about confidentiality. Although only a small percentage of visitors complete the testing process, all web site visitors receive educational information about syphilis prevention and additional testing, diagnosis, and treatment resources in San Francisco.

Startup costs for the initial web site design and implementation were approximately $20,000, and each blood draw and test performed was $31. Maintenance costs for STDTest.org, however, are much lower than other syphilis screening programs for MSM. Although other programs such as the new gay men's health clinic must expend substantial resources for staff salaries and facilities, maintaining the web site costs an estimated $40 per week of staff time.

Because the bulk of the expenses for this project have already been incurred, we will continue to offer this service to the community free of charge while increasing its visibility in the target community and conducting street, online, and clinic surveys to evaluate the project and improve utilization.

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