

Did We Have Sex? Proposal for an eHealth Solution to Warning Sexual Contacts of an STI Risk

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Abstract. Partner notification is an important part of reaching people at risk for a STI and getting them screened. There are however several barriers reducing the effectiveness of traditional partner notification. To overcome these barriers an eHealth app is proposed which helps people trace their sexual contacts in an anonymous way and find reliable information about safety and testing. This should allow people to warn their at risk contacts more easily when they test. As this is a rather new way of tracing sexual contacts, a multi-disciplinary approach is needed to study the possibilities of this technique.

Keywords. eHealth, contact tracing, sexual transmitted infection

1. Introduction

Both the UN and WHO have set a goal of ending STI worldwide. To achieve this, at least 90% of seropositive people should have received a diagnosis and of these diagnosed people at least 90% needs to receive treatment. This goal is in danger of not being reached at the moment due to a lack of screening [1, 2]. To reach these goals new ways to increase screening could be beneficial. Since the 20th century, contact tracing had become an integrated part of warning people at risk and screening or treating them for STI. However, this approach has issues of stigma and a high cost attached to them [3]. The arrival of geo social apps as a way of meeting people for sexual encounters has increased the possibilities of anonymous sexual encounters. This has created a barrier for contact tracing as it became more difficult to reach these sexual contacts [4]. Besides these organizational weaknesses, there is also a need of reliable information on how, where and when to get tested.

2. An eHealth solution

A proposed way of tackling these barriers could be using an eHealth app which helps individuals in the populations at risk to get successful screening and health updates. Such an app would require a feature which allows individuals to track and warn their sexual contacts in an anonymous way when testing positive for an STI. The partner

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notification feature should give agency on how to be contacted so that they can protect their privacy from others who have access to the phone of the app user. Finally, the app should inform users of the risks of their sexual behavior, how and where to get tested and be able to specify these locations based on personal needs. In addition, the app can be used as a reliable health information tool.

Once the user installed the app, they will receive the opportunity to specify the app according to their contact and privacy preferences. After the preferences are defined, users can digitally store sexual contacts via an identifier with date of contact, and insert the results of STI-tests in the app. Based on the sexual behavior of the person and the test results they and their contacts enter, or notifications received, an STI risk assessment for the user is made. When there is a low risk, the app should give no notification. If it cannot be excluded that the user has received an STI from their contact or the user is having an unsafe behavior based on their sexual and testing behavior, they will be considered at risk. These at risk users will be notified based on the preferences they specified beforehand. The notifications can vary according to the level of risk of the user. If the risk is higher but not certain, the user is reminded about this and simply advised to test themselves. If the risk is high, having a seropositive sexual contact after the last STI test of the user, they will be instructed to get tested. The user is asked to limit their contacts and have two STI tests, separated by an appropriate time based on the possible STI. If two negative tests are inserted in the app, no further actions are needed. If a test is positive, the user is asked to use the app to send a notification to their contacts within a specified time period. If the user fails to enter STI test results or does not send a notification to their partners, their contacts will be placed on an increased risk level and be urged to get tested.

3. Conclusions and call for research

This idea is a rather new approach to sexual contact tracing, leaving several questions unanswered. What are the legal restrictions if such an app were to be implemented? How would it be possible to integrate reliable STI test results? What are the defining motivations of the people interested in the use of such an app? How should we assess the risk of an user? What would be the effect of this risk assessment? What are the concerns and desires of populations at risk for using such an app? What are the technological restrictions and possibilities? In order to answer these questions, a multi-disciplinary approach is needed. The authors thus wish to invite researchers from relevant fields to study the possibilities of this proposal.

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