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REVIEW ARTICLE

Sexual Health Code Mobile Application to Reduce Transmission of Sexual Diseases

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Abstract

Sexual diseases are very common although many people are unaware of their high prevalence and potential risks of being infected by sexual diseases such as human papillomavirus, human immunodeficiency virus, syphilis, and gonococcal infection. Further, due to the associated social stigma with sexual diseases, individuals incline not to reveal their previous or current sexual diseases. Therefore, sexual diseases slowly spread among healthy individuals. Prevention methods have been developed to increase awareness of the disease. However, further measurements are necessary to reduce the spread of sexual diseases. Thus, we aim to discuss the potential benefits and risks of sexual health code application to record previous sexual partners without revealing their identities. Such applications may also notify previous sexual partners in case of present sexual diseases. Thereby, it may increase testing for sexual diseases in those individuals with sexual diseases. If they were not tested properly the application may have a notification that can only be removed after the sexual examination that shows they do not have the contagious sexual disease.

According to our best knowledge, there is no previous project or article that aims to record the sexual history of individuals to calculate the potential sexual risks. Such a system can help to identify potential risks and allows people to be notified about potential sexual diseases. In long term, it may increase awareness of sexual diseases and may reduce the prevalence of sexual diseases. In this manuscript, we will speculate on the functioning of the application and some potential privacy issues associated with the use of the potential application.

Keywords

Sexual health code, Prevention, Sexual diseases, Epidemiology

Abbreviations

STD: Sexually Transmitted Disease

Introduction

Sexually Transmitted Diseases (STDs) refer to infections that can be transmitted through sexual acts [1]. Sexually Transmitted Diseases are common problems in the world and may involve the skin to skin contact to infect other [2]. Common sexual diseases are including chlamydia, syphilis, gonococcal infection, chancroid, lymphogranuloma venereum, granuloma inguinale, and herpes. Some of the sexual diseases that may chronically impact and similar viral infections can account for nearly all sexual behavior-related deaths [3]. STDs are among the important ten causes of diseases in adults in developing countries [4].

Various models can examine heterogeneity in a variety of sexual behavior and calculate how different variations impact epidemiologic patterns such as heterogeneity in sex acts and having many sex partners [5,6].

Prevention of STDs includes assessing behavioral risk (e.g. risky sexual behavior) related to heterogeneity [1]. To increase awareness and reduce the spread of disease individual health codes that gives information about sexual diseases can be used as recently the health-code-based triage system showed high effectiveness in triaging patients with epidemiological history in China [7]. Especially, the onset of the COVID-19 has raised

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a substantial increase in the use of health tracking technologies [8] supported by the health applications of the government. Based on one's health data, a code representing personal health conditions is created by verifying what the resident reports [9]. In addition, health codes were used for various health tracking in cardiac [10] and pregnancy [11].

Collectively, changing the selection of sexual partners and avoiding certain sexual practices may reduce the risk of infection [12]. Considering it, sexual health code application that is supported by government health applications can help improve awareness and may reduce the prevalence of STDs.

The Functionality of the Sexual Health Code

The functionality and design of the sexual health code are important determinants of the success of the application. Firstly, individuals or both partners should voluntarily select whether they want to use it or not. Moreover, the application can include vaccination information to foster vaccination related to sexual health and help to calculate potential future risks. It should be supported by other government health applications to allow using official sexual test results to be processed. If the previous partner was detected positive, individuals should go to the hospital to be tested. If they were not tested properly the application may have a notification that can only be removed after the sexual examination that shows they do not have the contagious sexual disease. Furthermore, the application should include the period of intercourse.

Privacy Issues Associated with Potential Application

Privacy issues and how to store health data are some of the main concerns of the health code. National legislatures should embrace sufficient ethical codes to ensure that health tracking policies will be strictly prescribed by law [13]. Application-makers should pay attention to issues of confidentiality. Their name or national identity numbers should not be stored by the application to avoid potential stigma. Their previous sexual diseases can be removed if they were tested negative and they should be able to delete the application later.

Social Issues Associated with Potential Application

There is a possibility that couples are not interested in registering for the sexual health application. Furthermore, it may lead people to think that if there is no sexual notification, they are safe to have intercourse. Thus, necessary precautions should be taken to minimize the risks associated with the use of the application.

Conclusion

In long term, sexual health applications may increase awareness of sexual diseases, and thereby, may reduce the prevalence of sexual diseases.

Limitations

There are still limitations such as differences in smart device use as some people still prefer not to use mobile applications [14].

Suggestion for Further Studies

Ethical guidelines and strict health surveillance policies for health tracing apps are necessary to protect the citizens.

Conflict of Interest Statement

There is no conflict of interest to state in this study.

Competing Interests

There are no competing interests to state.

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