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ITSready: Development and early implementation of an integrated digital ecosystem for STI/HIV self-sampling, partner notification and AI-supported sexual health information for teenagers and young adults

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INTRODUCTION & OBJECTIVES

Young people continue to face barriers to STI/HIV testing, treatment and partner notification due to stigma, confidentiality concerns and limited access to youth-friendly services. The present study aims to develop, implement and evaluate ITSready: an integrated digital sexual health pathway combining self-sampling, partner notification and AI-supported sexual health information to improve access to prevention, diagnosis and care among people aged 16–25 years in Catalonia.



METHODS

The study focused on the development and implementation of three tools hosted on ITSready.cat:

TESTA'T, an online risk assessment, tailored HIV/Chlamydia trachomatis/Neisseria gonorrhoeae self-sampling based on genitalia and sexual practices, online results consultation, remote management, including remote CT treatment.

NOTIFICA, an anonymous partner notification linked to information or/and testing services

INFORMA'T, an AI chatbot providing evidence-based, gender-inclusive sexual health information. and referral.

During the first year, the project followed an implementation framework including co-development of digital tools, care pathways, evaluation instruments and interoperability. The chatbot was developed through a methodology combining scientific evidence, clinical guidelines and expert input to create thematic knowledge blocks covering STI prevention, symptoms, testing pathways, sexual violence and sexual wellbeing, with referral algorithms for situations requiring healthcare support.

RESULTS

The ITSready platform is fully operational, providing a digital pathway that integrates sexual health information, risk assessment, self-sampling, online results consultation, partner notification and linkage to care while ensuring confidentiality.

NOTIFICA (Figure 1) and INFORMA'T (Figure 2) were successfully integrated into the platform. The AI chatbot delivers evidence-based, gender-inclusive sexual health information and incorporates referral pathways for users requiring healthcare support, including those reporting situations compatible with sexual violence.

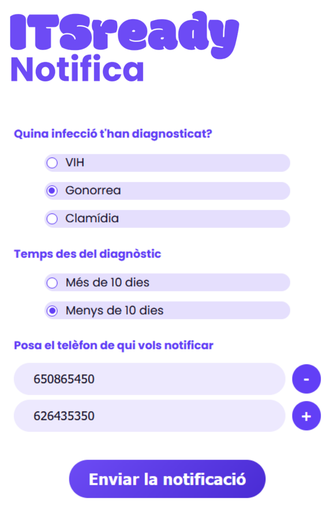

Fig.1 Screenshot of the "Notifica" web tool for reporting positive STI or HIV test results



Fig.2 Screenshot of the "Informa't" web tool, a chatbot providing verified information on sexual health

TESTA'T sample processing and results management system was successfully developed (Figure 3). During TESTA'T pilot and first implementation month, 44 young people were enrolled, 41.9% had never previously undergone STI testing. Twenty-two self-sampling kits were returned (50%), resulting in eight STI diagnoses, including six gonorrhoea and two chlamydia infections, including coinfections.

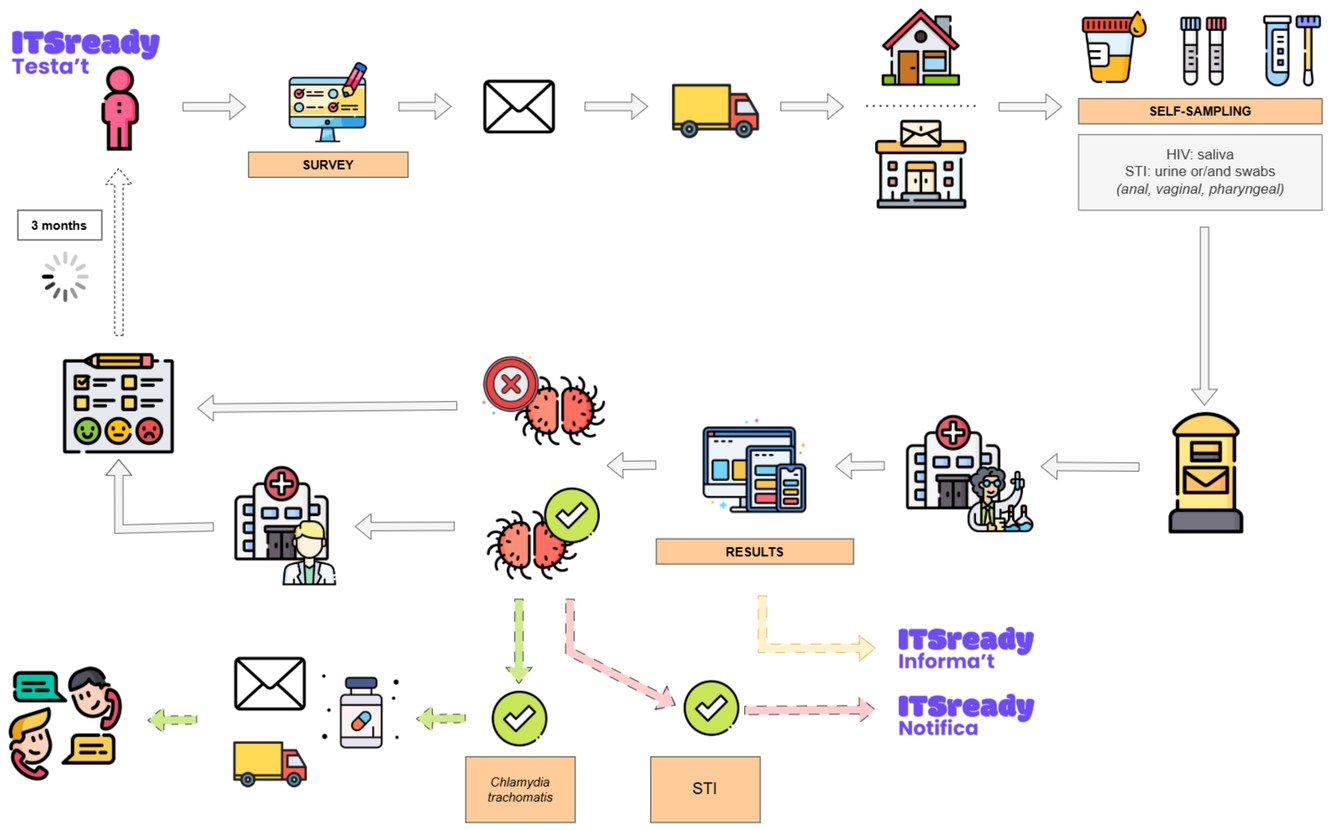

Fig.3 "Testa't" sample and results management process: a tool for at-home self-sampling

CONCLUSIONS

The findings support the feasibility of implementing an integrated digital ecosystem for youth sexual health. Initial implementation suggests that combining self-sampling, partner notification and AI-supported information within a single platform can reach young people, reduce barriers to testing and strengthen continuity of care. If effectiveness is confirmed, this model could be scaled and integrated into public sexual health services.

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itsready.cat