Maastricht University

Implementing home-based sexual health care in public health

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Summary

The general introduction of this dissertation examined preventive measures for reducing transmission of the **human immunodeficiency virus (HIV)** and **sexually transmitted infections (STI)**. Testing, treatment, and **pre-exposure prophylaxis (PrEP)** are efficient methods supporting priority populations (i.e., at elevated risk for HIV and STI) such as **men who have sex with men (MSM). Home-based sexual health care** including self-sampling testing and online sexual health counseling at home could increase access to MSM who experience challenges to attend location-based care. Finally, we introduced the implementation process of a regional home-based sexual health care service entitled "Limburg4zero", guided by the **Practical Robust Implementation and Sustainability Model (PRISM).**

In **Chapter 2** a realist review identified effective elements of home-based comprehensive sexual health care (home-based CSH) interventions by defining context, mechanisms, and outcomes. Results were guided by assessing PRISM outcomes. Elements such as tailored testing options, clear instructions, personalized dissemination, and enhanced individual engagement, may enhance uptake of STI/HIV testing. Health care providers perceived client benefits as a facilitator for the adoption of home-based CSH, even though there were concerns. Implementing these elements in home-based CSH may enhance integration in existing sexual health care and increase accessibility for key populations, potentially improving the uptake of STI and HIV testing and care services.

In **Chapter 3** we assessed the acceptability of home-based sexual health care among MSM who previously attended an STI clinic. MSM had a high intention to use self-sampling STI and HIV testing and was positive towards remote sexual health counseling. Most participants preferred online sexual health counseling alternated with location-based counseling. The results indicated no differences in sociodemographic characteristics concerning the intention to use home-based testing. Therefore, home-based sexual health care with self-sampling testing and online sexual health counseling may be suitable to continue serving MSM who previously attended location-based care.

In **Chapter 4**, we aimed to explore the acceptability and feasibility of an innovative method of self-sampling method for syphilis and HIV testing. This self-collection method could be used to self-collect blood from the upper arm by placing a device that creates a small vacuum. Among PrEP-using MSM, this innovative self-collection method was highly acceptable and feasible. The majority of samples contained sufficient blood volumes for routine HIV and syphilis testing, mostly with enough residual volume for additional tests.

Introducing innovative methods for home-based sampling could enhance sexual health care options for PrEP-using MSM.

Chapter 5 assessed the implementation process of home-based sexual health care, which involves continuous monitoring and optimization within a systematic framework (PRISM). Results examined the reach of previously untested MSM (priority population) with home-based sexual health care. Acceptability and feasibility were high among the priority population and health care providers (adopters). Home-based sexual health care service was implemented according to its key elements, with collaborative adjustments made to optimize it throughout the implementation process. Further optimizations are expected to improve inclusivity and long-term sustainability, making home-based care a necessary addition to location-based sexual health care.

Chapter 6 examined sociodemographic factors associated with increased HIV risk and reduced PrEP use among MSM born outside of Western countries. Among non-western-born MSM a higher rate of new HIV was diagnosed, and more frequent use of PrEP was reported in the past three months compared to western-born MSM. However, certain subgroups of MSM were less likely to use PrEP; these individuals were typically younger, resided in less urban areas, and had lower levels of education. Given that these subgroups face equal or higher risk, ensuring access to PrEP is essential. Therefore, efforts need to be made to improve PrEP accessibility for non-western-born MSM.

In **Chapter 7** the general discussion of this dissertation is described. Here we reflect on results from the previous chapters. We reflected on home-based sexual health care as a valuable addition to existing location-based sexual health care, with advantages and challenges for priority populations such as MSM. Also, some novel developments in home-based sexual health care were described, and their potential application in real-world settings. Recommendations for future developments and research were assessed. Consequently, the use of implementation science in home-based sexual health care. We highlighted the use of systematic frameworks such as PRISM and multi-disciplinary collaborations to maximize successful implementation outcomes.