

PhD defence Tom Platteau

How to improve HIV prevention? Development, implementation and evaluation of combination prevention interventions among key populations.

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Dit is de omschrijving

Supervisors

- Prof. Dr. Jacques van Lankveld (Supervisor Open Universiteit, Heerlen, The Netherlands)
- Dr. Eric Florence (ITM co-supervisor)

Summary

Infections with the human immune deficiency virus (HIV) remain an important health issue. In Europe and Belgium, high numbers of new HIV diagnoses persist. Without the prospect of a cure for HIV within the coming years, prevention, early diagnosis, linkage and access to specialized care and treatment are cornerstones of the management of HIV. Effective HIV prevention has been prioritized since the beginning of the HIV epidemic. An approach with a high and sustainable impact is combination prevention. Combination prevention for HIV covers a set of prevention interventions involving three dimensions: biomedical, behavioral and structural.

The general objective of this thesis was to improve HIV prevention across all three dimensions of the HIV combination prevention concept. In the different chapters, we presented projects that aimed to provide evidence on the effectiveness of innovative prevention activities on HIV prevention. On the **biomedical** dimension, testing has been highlighted as a prevention intervention. After having provided an overview of innovation and evolution of HIV testing activities in Europe in chapter two, we presented results of two consecutive HIV testing projects in Belgium in chapters three and four. Both projects used outreach approaches for sample collection. In the second project, we added a self-sampling approach allowing people to order a sampling kit via a website. We combined collection of blood and oral fluid samples with a test executed in the laboratory and delayed communication of HIV test results using cell phone messages (chapter three) and a secured website (chapter four). Although we aimed for innovation in both projects, safeguarding quality in all aspects of the HIV testing approach was fundamental. Both testing interventions were found to be effective as 2.9% and 2.2% of participants were newly diagnosed with HIV respectively. These proportions are higher than the consensus of 0.1% newly diagnosed participants as cut-off for cost-effectiveness in HIV testing projects.

Regarding the **behavioral** dimension of HIV combination prevention, results from a survey research project were presented in chapter five. We observed a decline in sexual inactivity among a group of European men who have sex with men living with HIV since the introduction of antiretroviral treatment for HIV. This finding suggests a tendency towards normalization of the sex life of people living with HIV. This implies investment to support people living with HIV in their sexual health. In chapter six, we presented results from a project studying the effectiveness of a computer-assisted counselling intervention for safer sex for people living with HIV. This intervention was tested among a group of European men who have sex with men, and consisted of three individual counselling sessions with a trained counsellor using computer-assisted tools (including video clips and interactive slide shows) to increase condom use in sexual encounters. A significant increase in condom use was observed three months after completion of the intervention, providing evidence for short term effectiveness. This effect could not be sustained up to six months after completion. Booster sessions may yield a longer term effect.

Structural prevention interventions aim to tackle circumstances that hinder people to practise safer sex, or make them vulnerable for HIV acquisition. In

this light, identifying groups at risk for HIV acquisition may be considered as a structural prevention intervention. Using an online survey, we assessed the sexual health of a group of swingers, their risk for acquisition of HIV and sexually transmitted infections (STI), and testing experiences, as presented in chapter seven. Compared to the general population, swingers were sexually very active, and several risk factors for acquisition of HIV and STI were identified. Swingers were more likely to have been diagnosed with an STI. Although swingers found their way to existing structures for testing, strengthening these structures and providing alternative testing options should be considered.

The different projects presented in chapters two to seven provided evidence on the effectiveness of a combination approach in HIV prevention. Turning this knowledge into practice is a key element to success of prevention. Therefore, a collaboration between policy makers, program officers, health care providers, researchers and communities is required to ensure access to qualitative support and functioning programs. Improving quality and functionality may also include innovation to find appealing ways of the delivery of services and programs. Computerized technologies may attract new users, and should receive attention in research and practice. Adapting prevention to new trends, their consequences and responses, is important in effective prevention. In chapter eight, effects and responses to pre-exposure prophylaxis, chemsex and couple testing were discussed.

Combination prevention for HIV covers a range of interventions on a structural, behavioral and biomedical level. All three levels are necessary to achieve highly effective prevention. Securing rights of key populations to reduce stigma and discrimination, and safeguarding or improving access to services are crucial structural ambitions. Investment in the development and evaluation of effective behavioral interventions using appealing ways of program delivery is a challenge on the behavioral dimension. An important biomedical goal is to diagnose as many people living with HIV unaware of their status as possible by expanding HIV and STI testing approaches. Although testing for HIV is critical, linkage to care, and retention in care should be integrated in the evaluation of each testing approach. Optimizing linkage and retention requires qualitative HIV care. Quality is reflected in accessibility, and a team of professional health care providers with medical and psychological expertise who treat patients with an open and respectful attitude.

Please confirm your attendance by sending an email to tplateau@itg.be.