Topic: **Development and Implementation of an educational Intervention to Improve the Uptake of Pre-Exposure Prophylaxis Among University Students in Limpopo Province, South Africa.**

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INTRODUCTION

Global HIV Epidemic & PrEP Strategy Overview (2022)

- **Current State:**
  - **39 million** people living with HIV globally.
  - **1.3 million** new infections in 2022.
  - **630,000** AIDS-related deaths (est. range: 480,000 - 880,000).
  - **56,000** new infections among young people in South Africa.
  - **45,000** young people died from AIDS-related causes globally; **4,700** in South Africa.
- **Prevention Strategy:**
  - **National Strategic Plan 2023-2028:** Focus on reducing new HIV infections through high-impact prevention interventions.
  - **WHO Guidelines (2015):** Advocate daily oral Pre-Exposure Prophylaxis (PrEP) for those at high risk.
- **PrEP Details:**
  - **Medication:** Tenofovir (TDF) 300mg + Emtricitabine (FDC) 200mg (Truvada).
  - **Efficacy:** Reduces HIV risk by 90% with safe sex practices.
  - **Introduced in South Africa (2017):** Targeted at-risk student population.
- **Future Outlook:**
  - Growing global PrEP usage; significant potential for expansion.

PROBLEM STATEMENT & JUSTIFICATION

Problem statement: PrEP is highly effective in preventing HIV, yet uptake among university students in Limpopo Province is extremely low—only **68 of ~23,000 students** have enrolled since 2017, despite **247 new HIV infections** during the same period. Stigma, cultural beliefs, misinformation, limited access, and insufficient provider training discourage students from seeking PrEP and related services. This study uses a **quasi-experimental approach** to identify these barriers and implement culturally sensitive interventions to improve PrEP uptake and reduce HIV transmission on campus.

JUSTIFICATION

- **High Public Health Need:** High HIV burden, and students remain a vulnerable group.
- **Preventable Infections:** PrEP is effective, yet underused—indicating a fixable public health gap.
- **Evidence of Insufficient Strategies:** The **247 new infections** highlight urgent need for improved interventions.
- **Addressable Barriers:** Stigma, misinformation, and poor accessibility hinder uptake but can be resolved through targeted strategies.
- **Potential for Impact:** Identifying and addressing these barriers can significantly increase PrEP uptake and improve student health outcomes.

AIM&OBJECTIVES

Aim: The aim of the study was to develop and implement an educational intervention to improve the uptake of Pre-Exposure Prophylaxis among university students in Limpopo Province.

Objectives: Phase 1 (Pre-intervention phase)

- To measure the knowledge of and attitude to risk factors associated with contracting HIV amongst university students.
- To measure the barriers and facilitators of PrEP uptake amongst university students.
- To explore the knowledge of clinical practices related to PrEP, ability to identify individuals at risk of HIV infection and confidence in prescribing PrEP amongst health care providers.

Phase 2 (Intervention phase)

- To develop and implement an educational intervention to improve the uptake of PrEP amongst university students.

Phase 3 (Evaluation phase)

- To evaluate the educational effect of the intervention to improve the uptake of PrEP after 3 months of the intervention.

Theoretical framework

The Health Belief Model (HBM) was selected as the theoretical framework for this study because it provides a well-established and appropriate structure for understanding and influencing health-related decision-making, particularly in the context of HIV prevention behaviors such as the uptake of Pre-Exposure Prophylaxis (PrEP). The model is grounded in the premise that individuals' engagement in preventive health actions is influenced by their perceptions of risk, benefits, and barriers, as well as their confidence in their ability to take action.

Each construct of the HBM directly aligns with the objectives of the educational intervention. **Perceived susceptibility** and **perceived severity** are relevant in assessing students' understanding of their personal risk of HIV infection and the serious health and social consequences associated with HIV. **Perceived benefits** address students' beliefs about the effectiveness of PrEP in preventing HIV, while **perceived barriers** capture concerns such as stigma, side effects, accessibility, and misconceptions surrounding PrEP use. **Cues to action**, such as targeted health education, peer engagement, and campus-based awareness activities, are integral to prompting PrEP initiation. **Self-efficacy**, a key component of the HBM, supports the development of students' confidence in their ability to access, initiate, and adhere

METHODOLOGY

Methods: This study employed a mixed methods approach, quantitative and qualitative methods.

Design: The study applied a convergent parallel design, where there was simultaneous data collection for qualitative and quantitative research. The quantitative data assisted to investigate the knowledge and attitude to PrEP use, and to identify barriers and facilitators to PrEP uptake. The qualitative data assisted in exploring those health-related factors that hinder the uptake of PrEP use. The study further conducted a Quasi-experimental study where the researcher administered a single test, Pre -and post-survey.

SETTING & STUDY POPULATION

Setting: The study was conducted in Limpopo Province, which is the fifth largest Province of all nine Provinces in South Africa. In the province there are two universities in Capricon and Vhembe district, two satellite universities campuses and seven Technical Vocational Education and Training (TVET) colleges. The two universities are the only ones with clinics that provide full HIV services and were used in the study.

Study population: The study population for both the qualitative and quantitative study included registered students and staff members at the two universities in Limpopo Province were Highly Active *Antiretroviral Therapy (*HAART) services are offered. The population included first, second- and third-year students only, and this is done on the basis of ease of follow-up. Staff members included only those that are directly involved providing PrEP.

PILOT STUDY

- A pilot study was conducted at a sister university to assess the clarity and relevance of the data collection instruments. Findings from the pilot led to revisions of several questionnaire items that were not easily understood by participants, as well as modifications to selected interview guide questions to improve coherence and depth.
- The pilot results revealed limited knowledge of PrEP among students, with many of those who were aware of PrEP reporting that they did not know it was available at the campus clinic. Although professional staff members demonstrated greater awareness of PrEP, their involvement in PrEP-related activities appeared limited, largely because these services are primarily managed by a dedicated HAAST programme officer.

DATA COLLECTION

Data collection commenced on 7 August 2025 and concluded on 28 October 2025. Initially, questionnaires were distributed to students during class sessions after obtaining permission from the relevant gatekeepers. This approach was later discontinued as students began preparing for examinations. Following approval from the ethics committee, a QR code was generated and the questionnaires were subsequently distributed electronically via students' email addresses.

NEXT STEPS

- Results interpretation
- Statistician
- Co-coder
- Articles (x3) to accredited journals
- Writing of chapters
- Submission to external
- Graduation….**Dr Hlodis**.

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