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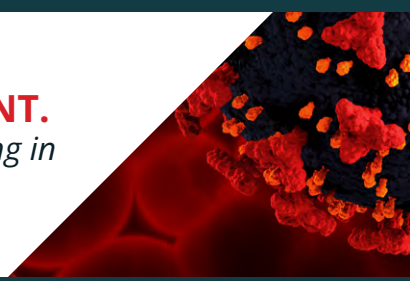

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inside

Prevention in Action

HIV NURSING MATTERS

Summary of articles from our Guest Editor

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Prevention in Action

The World Health Organization recognizes HIV and TB as deeply interconnected global health concerns, with TB remaining one of the leading causes of death among people living with HIV because of compromised immune systems. Co-infection complicates treatment for both conditions and significantly worsens patient outcomes, making it a critical public health priority. At the same time, syphilis infections are increasing, especially among pregnant women, men who have sex with men (MSM), and individuals living with HIV.

To achieve the UNAIDS goal of eliminating new HIV infections by 2030, there is a growing need for integrated prevention strategies rooted in community-level healthcare interventions. Central to this effort are nurse-led initiatives within primary healthcare settings, which play a vital role in expanding access to prevention, testing, and treatment services.

This issue of HIV Nursing matters entitled 'Prevention in Action' explores an abundance of interventions that encourage nurse led prevention initiatives. The publication explores topics on nurse led strategies to enhance pre-exposure prophylaxis (PrEP) uptake, meeting youth where they are, STI prevention, TB Preventative therapy (TPT) in pregnant women, long-acting PrEP, psychosocial barriers to PrEP uptake and service integration strategies to reduce waiting times in clinics.

Jonas Langa's article takes us beyond the clinic walls to explore provision of PrEP in an effective and sustainable manner through nurse-, pharmacist-, and peer-led approaches. The article highlights PrEP as a key HIV prevention tool that should be available in different healthcare and community settings to improve access for people at risk of acquiring HIV. It emphasises the role of nurses in expanding PrEP services, while

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pharmacists, allied health workers, and peer-led initiatives help increase awareness, reduce stigma, and support individuals in managing their sexual health. The article also discusses how PrEP can be integrated into existing health systems through safe, supportive, and accessible services, while recognising both the benefits and challenges of implementing these approaches.

Mr Potsane offers insights into how the *Shout It Now* programme improves HIV prevention by empowering mostly young NIMART-trained nurses to use digital clinical systems to deliver services. It provides a practical, user-friendly guide to facilitate provision of sexual and reproductive health services. *Shout It Now* demonstrates that young people are more likely to use and remain engaged in HIV prevention services when those services are youth-friendly and tailored to their needs. By replacing intimidating facility-based care with peer networks, digital tools, and nurse-led services, it creates a more accessible system. The message emphasises the need to scale effective approaches, invest in innovation, and prioritise adolescent girls and young women (AGYW) at the centre of HIV prevention efforts.

Dr Gill's article brings to the forefront the resurgence of bacterial STIs like syphilis and chlamydia globally and in South Africa, especially among MSM and transgender women (TGW) leading to interest in doxycycline post-exposure prophylaxis (doxy-PEP), to reduce STI risk. While most supporting evidence come from studies in MSM and TGW, studies are underway to determine efficacy in cisgender women. Doxy-PEP is intended as an additional prevention tool alongside existing measures like condom use, HIV testing and PrEP, regular STI screening, treatment, and partner notification.

Dr Davies article on TPT explains that although TB is relatively uncommon in pregnancy, it contributes significantly to maternal deaths, especially in women with HIV. It explains that TPT is now standard in HIV care and helps reduce the risk of active TB. Current guidelines recommend a risk-based approach: pregnant women with advanced HIV disease should receive TPT during pregnancy, while those with higher CD4 counts should wait until after delivery. Overall, TPT is strongly recommended for pregnant women with advanced HIV because the benefits in preventing TB outweigh potential risks.

Dr Singh's article provides a guideline intended to help healthcare workers, especially nurses, counsel patients and administer long-acting injectable PrEP - lenacapavir (LEN)- safely, supporting its integration into South Africa's HIV prevention programs in line with national and WHO guidance. LEN is a new HIV-1 capsid inhibitor given as an injection every 26 weeks and has shown strong efficacy in large phase 3 trials. It is generally safe, with the most common side effect being mild injection-site reactions, and it appears safe during pregnancy without needing dose adjustments.

Although PrEP is an effective prevention method, its use in primary health care settings is limited. Dr Sigid's article reviews literature from 2010–2024 on psychosocial and structural barriers to PrEP use, focusing especially on adolescents and key populations. Barriers to uptake and continued use include stigma, misconceptions, fear of being judged as HIV-positive, and concerns about confidentiality; issues particularly affecting adolescents and young people accessing sexual and reproductive health services.

Dr Muller concludes that HIV prevention in South Africa has improved through early diagnosis and antiretroviral treatment (ART), which can reduce transmission when viral load becomes undetectable. The article also highlights PreP, especially daily TDF/FTC tablets, as a highly effective prevention method that can reduce HIV infection risk by up to 86% when taken correctly. However, expanding PrEP access in public clinics faces challenges such as limited nurse training, medicine shortages, weak infrastructure, and poor information systems. The article also addresses common nurse concerns, including HIV resistance, kidney-related risks, necessary baseline tests, and identifying at-risk groups. Overall, PrEP is safe, affordable, and effective, and emphasizes that nurses and clinics are key to improving access and reducing HIV transmission in communities.

Jacob's and colleagues describe how an integrated healthcare service delivery model - combining preventive, promotive, and curative services in one consultation space - can improve primary healthcare leading to shorter patient waiting times (under 3 hours), better patient flow, improved quality of care, and a better staff experience. It emphasizes that successful integration depends on strong planning, leadership, and organisational commitment including alignment of infrastructure, staff capacity, and operational systems involving patients, to improve appointment adherence. Ongoing training, mentorship, structured change management, and regular review meetings are important for sustaining the model and addressing challenges.

In an era where HIV continues to claim millions of lives globally, and in the absence of a cure or vaccine, prevention strategies become crucial in reducing new infections and protecting public health. Interventions highlighted here form foundations for multidisciplinary approaches to curb new infections.

Beyond the clinic walls: Nurse, pharmacist and peer-led strategies to enhance PrEP uptake and sustainability

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Introduction

Pre-exposure prophylaxis (PrEP) has emerged as a cornerstone of HIV prevention, offering individuals at substantial risk of HIV infection a safe and effective option to protect themselves[1-3]. While clinical efficacy is well-established, programmatic uptake remains uneven across Southern Africa, often hindered by service delivery gaps, perceived low risk, and social barriers[4-6].

Nurses and allied health professionals are central to bridging this gap, ensuring that PrEP is not only available but also accessible, acceptable, and sustainably integrated into routine care[7-9]. The purpose of this article is to explore the strategic programmatic shifts required to optimise PrEP use, focusing on nurse/pharmacist/peer led delivery models. It seeks to highlight why PrEP matters for diverse populations, including anyone at substantial risk of acquiring HIV, serodiscordant couples, adolescents, miners, mobile populations, key populations. It also examines how programmatic strategies such as integration into primary healthcare, community engagement, nurse/pharmacist/peer led models, adherence support, and data monitoring can strengthen prevention efforts.

The article also considers the challenges faced in oral PrEP implementation, such as clients declining uptake and funding constraints, and reflects on

how these lessons can inform readiness for new long-acting options such as lenacapavir. By addressing these objectives, the article aims to provide nurses and allied health professionals with practical insights and guidance to enhance HIV prevention, adapt to evolving innovations, and ultimately improve population outcomes across diverse communities.

Why PrEP matters: A focus on diverse, at-risk populations

Oral PrEP is highly effective when taken consistently, reducing HIV sexual acquisition risk by up to 99%, and by at least 74% among people who inject drugs[10]. For nurses, the challenge lies not only in prescribing or dispensing PrEP but in supporting patients to understand its role, adhere to treatment, and feel empowered in their prevention choices. It is not limited to any single population but is a prevention tool for everyone at substantial risk of HIV infection. For serodiscordant couples, where one partner is HIV-positive and the other is HIV-negative, ART-mediated viral suppression (U=U) eliminates sexual transmission risk; therefore, PrEP for the HIV-negative partner is primarily indicated as a bridge until suppression is confirmed or when viral load/adherence is uncertain, rather than as an additive benefit once durable suppression is achieved[11-13]. Mining communities and migrant workers, who face higher HIV prevalence due to mobility, limited healthcare access, and social factors, benefit from workplace health programmes that integrate PrEP into occupational services, helping reduce stigma and improve uptake. Tourists and mobile populations, such as truck drivers, may engage in higher-risk sexual encounters during travel, and PrEP offers them a safeguard when consistent access to condoms or HIV testing is not guaranteed. Adolescents and young women, who remain disproportionately affected by HIV in Southern Africa, are empowered by PrEP to take control of their sexual health, especially in contexts where negotiating condom use is difficult. Key populations, including men who have sex with men, sex workers, and transgender individuals, also rely on PrEP as a vital prevention tool, though stigma often limits access.

Importantly, PrEP is not limited to these groups alone. It is recommended for anyone at substantial risk of HIV infection, including individuals who may be sexually active without knowing their partner's HIV status or suspect possible exposure through other relationships. Pregnant and breastfeeding women are a particularly critical group, as acquiring HIV during these periods carries a heightened risk of transmitting the virus to their baby[11]. By offering protection during this vulnerable time, PrEP helps safeguard both maternal and child health, reinforcing its role as a comprehensive prevention strategy across diverse populations. Nurses (through NIMART) and pharmacists (through PIMART)* are central to ensuring that PrEP services are tailored to these diverse groups, providing counselling, education, and support that make prevention accessible, equitable, and stigma-free.

Programmatic Strategies for Strengthening Uptake

To optimise delivery, specific strategic actions are required at the facility and community level. Table 1 outlines how nurses and pharmacists can lead these efforts by embracing decentralised and de-medicalised models.†

* **PIMART (Pharmacist-Initiated Management of ART):** A programme that allows pharmacists to start and manage HIV treatment.
† **De-medicalised models:** Making PrEP easier to access without complicated hospital procedures, such as offering it in pharmacies or nurse-led clinics

Table 1: Programmatic Strategies for PrEP Uptake

Strategy	Key actions	Role of nurses/pharmacists/peers
Service integration	Embed PrEP into sexual reproductive health services, STI management, family planning services, anti-natal care, post-natal care and community-based services.	Offer PrEP services as a routine part of sexual health and general health check-ups, and use of community health workers and peers to facilitate linkage and navigation for nurse/pharmacist/ peer led or mobile clinics[14]
Community-led demand	Awareness campaigns, peer educators, community dialogues.	Lead education sessions, address myths and stigma, involve target populations in design to foster ownership[15].
Nurse/pharmacist/peer led models and clinics e.g. Unjani private clinics, Clicks, Dischem	Task-sharing¶, decentralised†† initiation (NIMART/ PIMART).	Nurses and pharmacists can initiate PrEP and monitor adherence, which will reduce physician load.
Adherence Support	SMS reminders, pill boxes, peer support groups, calling or doing home visits to people who missed appointments.	Build trust, encourage open conversations and provide more interaction time to improve patient satisfaction[16].
Differentiated# care models	Telehealth, mobile health, multi-month dispensing, and peer groups to allow people to receive PrEP discretely without being seen by their community and fearing judgement.	Build long-term trust and provide tailored adherence support through digital and peer platforms[17].
Capacity building	Standardised training for nurses and allied health professionals.	Improve provider confidence and ability to navigate structural§ barriers[18].
Data & monitoring	Reliable documentation and programmatic evaluation.	Record initiation/follow-up, inform policy decisions.
Future readiness for lenacapavir	Health care worker training, infrastructure, patient education, monitoring and evaluation, ensuring clients come back every 24-28 weeks.	Prepare for the administration of injections (especially, lenacapavir, long-acting cabotegravir, where available) and manage transitions from oral PrEP. Demand creation in the community and addressing myths and stigma.

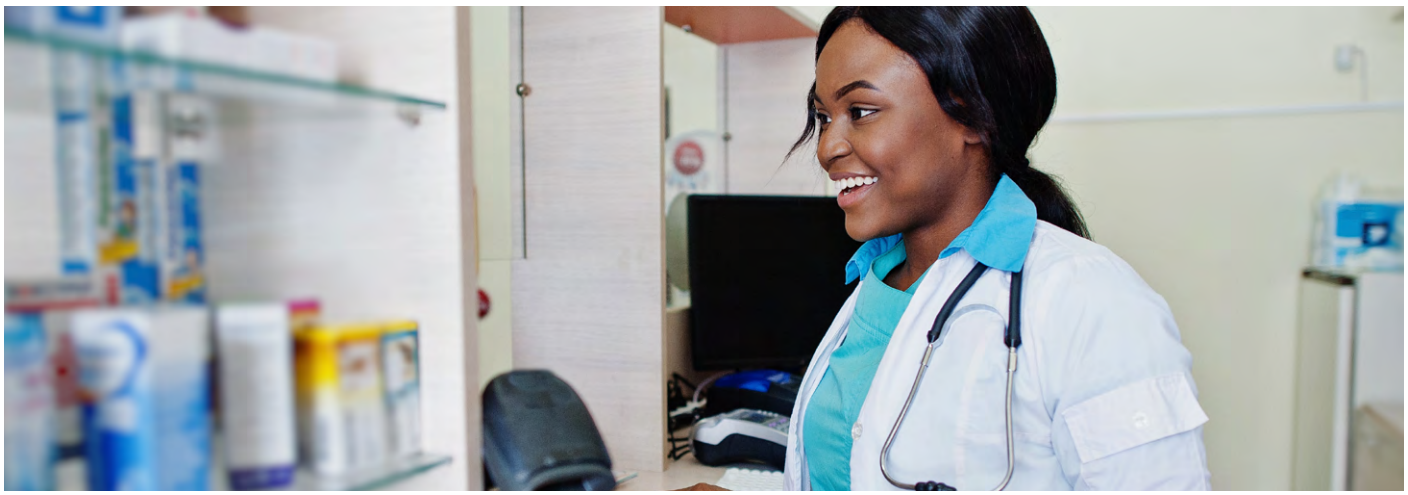
Service delivery strategies for PrEP integration

Service integration can be addressed through:

- **Group health talks:** Provide PrEP information in clinic waiting rooms or other communal spaces so patients can self-identify as being at risk, reducing the need for lengthy one-on-one counselling. Such as use of multimedia and digital platforms: Strengthen PrEP awareness and demand creation by integrating videos, posters, audio messages, radio segments, and short educational clips within clinics and community settings. Additionally, leveraging social media platforms (e.g., WhatsApp broadcast groups, Facebook pages, TikTok, community radio livestreams) can extend PrEP messaging beyond physical clinic spaces, ensuring wider reach especially among adolescents, young adults, and hard-to-reach populations.
- **Routine HIV testing services (HTS) counselling:** Ensure HTS counsellors automatically include PrEP counselling for anyone who tests HIV-negative, embedding

Oral PrEP is highly effective when taken consistently, reducing HIV sexual acquisition risk by up to 99%, and by at least 74% among people who inject drugs[10].

¶ **Task-sharing:** Sharing responsibilities between nurses, pharmacists, and doctors so more health workers can provide PrEP services.
†† **Decentralised models:** Bringing PrEP services closer to communities, for example through local clinics, pharmacies, or mobile clinics, instead of only at big hospitals.
# **Differentiated care model:** Offering PrEP in flexible ways that suit different people's needs, such as telehealth, longer medicine refills, or peer support groups.
§ **Structural barriers:** Challenges that make it hard for patients to get care, like long travel distances, stigma, or lack of privacy in clinics.



prevention into standard care (status neutral).

- **Integrated services:** Avoid separate queues for PrEP or other "stigmatised" services; instead, deliver PrEP alongside routine sexual and reproductive health services to normalise uptake.
- **Provider training:** Train all clinic staff to deliver non-judgemental, confidential, and inclusive services for diverse populations, including key populations and adolescents.
- **Privacy safeguards:** Guarantee closed doors and private spaces for sensitive discussions, reinforcing confidentiality and trust.
- **Youth-friendly spaces:** Establish dedicated adolescent and youth zones within clinics to create welcoming, stigma-free environments that make services more accessible to younger clients. In addition, introduce peer navigators, peer educators, and PrEP champions who can engage youth in relatable ways, provide tailored PrEP information, answer questions, and support informed decision-making around HIV prevention options. Their involvement enhances trust, improves awareness, and increases uptake among young people by ensuring that messages come from individuals they identify with.
- **Key population support:** Ensure providers are trained to assist sex workers, men who have sex with men, transgender individuals, and other key populations with sensitivity and respect.

Strengths vs. limitations: Navigating the landscape

Nurses must navigate significant systemic challenges while leveraging existing strengths (Table 2) to maintain prevention momentum.

Table 2: Current landscape of PrEP implementation

Strengths	Limitations
Strong evidence base confirming PrEP effectiveness, encouraging policy adoption	Uptake has plateaued or declined due to adherence fatigue, perceived side-effects, pill burden, low risk leading to high discontinuation[19]
Integration into existing services (family planning, STI screening, HIV testing)	Funding constraints and reliance on donor support raise sustainability concerns
Nurse/pharmacist/peer led, and task-sharing models expand access in rural and underserved areas	Health system weaknesses: staff shortages, limited training, and poor infrastructure
Community engagement through peer educators and tailored awareness campaigns	Persistent stigma and misconceptions (e.g., PrEP seen only for sex workers or MSM)
Policy frameworks and donor support provide resources and guidance	Limited reach to key populations such as miners, mobile populations, and serodiscordant couples
Pilot programmes demonstrate feasibility and inform national guidelines	Readiness gaps for new innovations like long-acting injectable PrEP (lenacapavir), and myths and stigma around prevention injections (often related to COVID vaccine myths)

Key messages for nurses

- PrEP is another **prevention tool,** not a replacement for other strategies such as condoms or regular HIV testing. It empowers clients by giving them greater control over their own protection and enabling them to take proactive responsibility for reducing their HIV risk. Clients are more likely to decline PrEP if they do not perceive themselves at risk; education must address this gap[5].
- Nurses should emphasise **choice and empowerment,** helping clients see PrEP as part of a broader prevention package.
- **Nurse/pharmacist/peer led strategies:** Strategic uptake depends on integration, community engagement, and multidisciplinary delivery models in which nurses play a central role alongside pharmacists and trained peer providers. Nurses should advocate for the integration of PrEP at every clinical touchpoint, from emergency departments to community pharmacies.
- Monitoring, adherence support, and ongoing risk assessment are essential for long-term success. As PrEP is not necessarily a lifelong medication, clients may cycle on and off PrEP depending on their level of risk, requiring continuous reassessment and counselling.

PrEP is recommended for anyone at substantial risk of HIV infection, including individuals who may be sexually active without knowing their partner's HIV status or suspect possible exposure through other relationships. Pregnant and breastfeeding women are a particularly critical group, as acquiring HIV during these periods carries a heightened risk of transmitting the virus to their baby[11].

Conclusion

PrEP offers a transformative opportunity to reduce HIV incidence in South Africa and the world. However, its success depends on programmatic strategies that prioritise the clients experience beyond the clinic walls. By leading through integration, and de-medicalised delivery models, nurses and allied health professionals can ensure that PrEP moves from a clinical possibility to a community reality.

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Meeting Youth Where They Are: A Nurse-Led, Peer-Supported, Digital Health Ecosystem for Decentralised Youth HIV Services: A South African Case Study

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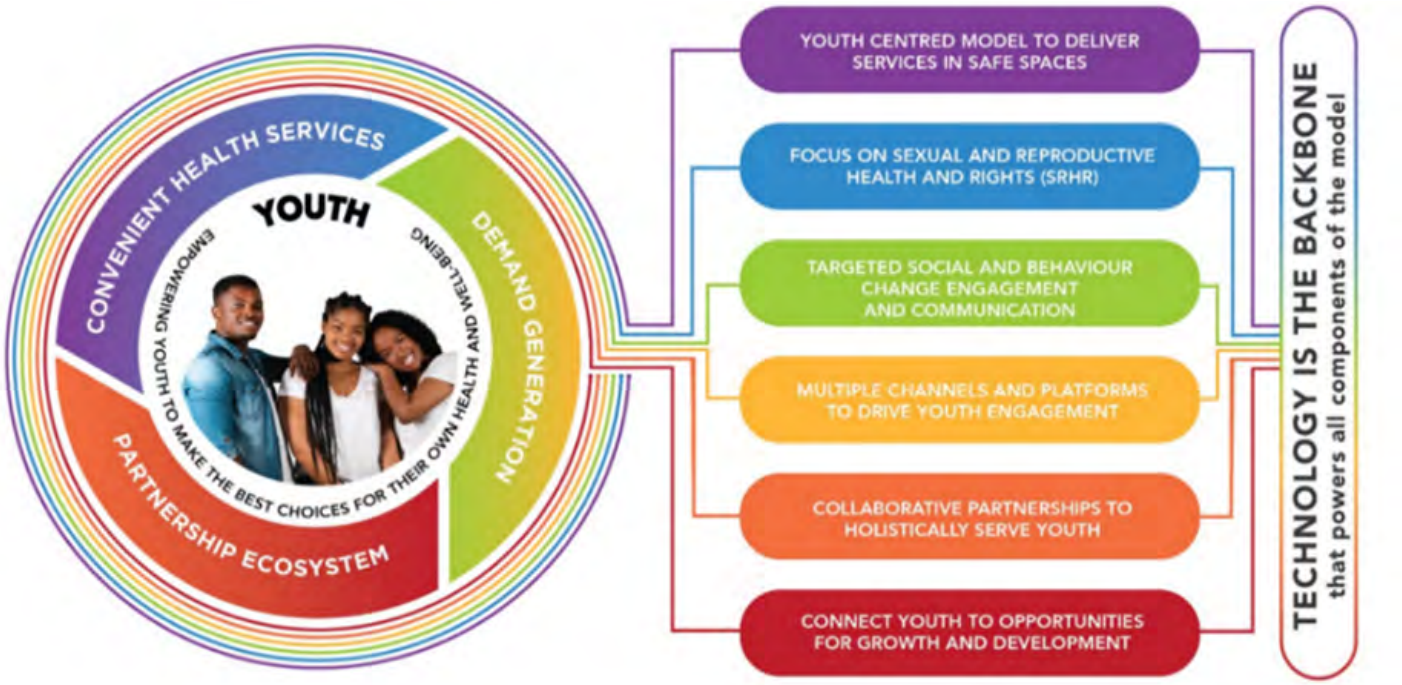
Background

South Africa continues to face a critical HIV epidemic, reflecting acute vulnerability among young women and marginalised youth[1]. Adolescent girls and young women (AGYW) in South Africa face disproportionately high risks of HIV infection, driven by structural, social, and biological vulnerabilities, including gender-based violence, food insecurity, and limited access to youth-friendly health services[2-4].

Traditional facility-based models often fail to reach AGYW due to stigma, inconvenient hours, and a lack of confidentiality. Community-based mobile clinic models, such as the Shout It Now program, have emerged to deliver differentiated HIV prevention services, integrating biomedical, behavioural, economic and structural interventions tailored to the unique needs of AGYW[3]. Shout is a youth-focused South African non-governmental organisation (NGO) specialising in community-driven HIV prevention, sexual and reproductive health and rights (SRHR), and youth empowerment. Established in 2007, Shout has evolved into a national partner with deep expertise in delivering client-centred services. For over a decade, Shout has been an HIV prevention partner in Northwest and Gauteng, grounded in a *"nothing for us, without us"* philosophy that ensures community voices are central to program design.

Figure 1: Shout It Now Operating Model.



Anchored on client-centricity and a human-centered design (HCD) approach, the Shout Operating Model serves as a blueprint for providing comprehensive services that respect the dignity of clients and their right to informed choice. All implementation is deeply grounded in behavioural and social science, employing effective social and behaviour change techniques that engage youth, gatekeepers, and community leaders to create demand and reduce stigma for sexual, reproductive health rights (SRHR), HIV, and gender-based violence (GBV) services.

As detailed in Figure 1, Shout has built a custom digital health ecosystem, including integrated apps, chatbots (e.g., Self-Cav, an AI-powered WhatsApp Companion designed specifically for AGYW), real-time dashboards, and platforms for virtual support, self-testing, booking, e-consents, and adherence monitoring. These digital tools not only empower clients with confidential, accessible information and appointment support but also enable granular, real-time data collection to inform rapid, evidence-based decision-making and adaptive programming for providers.

Decentralised and Mobile Delivery

Shout's innovative delivery model extends beyond traditional facility-based rollout by meeting youth where they are. Peer Educators build trust first, using in-person edutainment and relatable content to transform mobile clinics into welcoming destinations where AGYW feel safe. These mobile clinics reach deep into communities, including schools, tertiary campuses, and informal settlements, reimagining community health services as Peer-led community outreach services that create an inclusive, one-stop-shop AYP-friendly environment that embraces the whole individual, reduces stigma, enhances privacy and safety, and fosters effective referral pathways. Through peer-led outreach, youth ambassadors engage vulnerable and underserved groups, ensuring no one is left behind.

When an AGYW is ready to engage, services are initiated through either a Health and Wellness Counsellor or an AI-powered chatbot, both of which administer standardised violence and mental health screenings. These platforms also provide integrated HIV testing and counselling, with all services linked through a digital clinical portal that enables nurses to initiate PrEP or PEP for eligible clients immediately. Shout operates through a paperless, biometric health information system, through which health care workers complete client records in real time during consultations. This biometric system strengthens both data integrity and clinical care continuity by allowing each client's service journey to be tracked longitudinally, regardless of location.

The district community team has also established and maintains a robust bidirectional referral system with Department of Health (DoH) facilities. Most clients referred to DoH services are monitored across multiple platforms, including the Three Interlinked Electronic Registers (TIER.Net) system, a widely used, non-networked electronic patient monitoring system in South Africa designed to support the management and reporting

of HIV, TB, and Antiretroviral Therapy (ART) services. Additionally, the Shout call centre, AI chatbot data, and client management system are used for tracking patient data generated at community level. This comprehensive monitoring eliminates unconfirmed referrals and prevents disruptions in care that might otherwise discourage clients from seeking services at public facilities. Underpinning this approach is the integration of Professional NIMART Trained Nurses, Peer Ambassadors and Social Workers.

Shout is a youth-focused South African non-governmental organisation specialising in community-driven HIV prevention, sexual and reproductive health and rights, and youth empowerment.

Nurse-and-Peer-Led Community Model

Shout It Now is transforming HIV prevention by empowering NIMART-trained nurses, 70% of whom are below the age of 35, as clinical digital experts to manage the clinical portal and provide clinical services. The nursing staff is complemented by Peer Ambassadors. The Peer Ambassadors are recruited from the community we serve. In this integrated model, the Peer Educators welcome and reassure, the Counsellors test and counsel, and the Nurses prescribe and initiate treatment.

To optimise the care continuum, clinical staff employ several targeted quality care strategies. First, process simulation uses operational data to maximise quality one-on-one time between nurses and clients. Second, selective disclosure protocols build trust with AGYW through tailored communication strategies that respect privacy while adhering to legal frameworks. Third, differentiated service delivery (DSD) tailors the frequency and location of visits to the specific needs and risk profiles of different youth segments, ensuring care is both flexible and responsive. Recognising the intersection between HIV risk and gender-based violence (GBV), Shout integrates GBV response as a core component of its mobile services. Social Workers are embedded within the model to provide immediate, trauma-informed support using the World Health Organisation's LIVES model. This framework ensures that AGYW who disclose experiences of violence receive Listen, Inquire, Validate, enhance safety, and Support services in a confidential and compassionate manner, addressing a critical structural driver of HIV vulnerability.

For nurses operating at the community level, this integrated, digitally supported model offers several advantages. It reduces the administrative burden associated with manual data entry and cross-referencing disparate records, allowing nurses to dedicate more time to direct client care and complex decision-making. The real-time visibility of client histories, including previous interactions, referrals, and clinical outcomes, enhances continuity of care, particularly for young women navigating multiple services across different sites. Additionally, the structured escalation pathways and built-in clinical decision support reduce cognitive load and the risk of oversight, ensuring that urgent cases, such as those involving violence, suicidal ideation, or positive HIV results, are promptly managed. Ultimately, the AI system does not replace nursing expertise but rather amplifies it, enabling a more efficient, accountable, and client-responsive model of community-based care.

Digital Health Ecosystem

Shout has built a custom digital ecosystem designed to support virtual care and real-time decision-making. The AI-powered chatbot serves as an initial point of contact, efficiently managing entry-level tasks and performing clinical triage to ensure that clients receive timely and appropriate

care. It is designed to accurately interpret HIV self-screening (HIVSS) results, capture the outcome directly into the digital system, and provide comprehensive, client-centred support, including psychosocial counselling, adherence information, and linkage guidance. Based on the triage logic, the chatbot immediately escalates cases requiring biomedical intervention or urgent attention to a nurse. This includes instances of disclosed abuse, HIV results requiring linkage to PrEP or antiretroviral therapy (ART), suicidal ideation, and any situation classified as mid- or high-risk. It provides real-time guidance, appointment booking, and adherence monitoring, acting as both a discreet gateway and a constant companion in their prevention journey. This digital layer is further strengthened by real-time dashboards that enable granular data collection for adaptive programming, as well as digital triage tools that automate routine health education, freeing up clinical staff to focus on complex cases. A human-in-the-loop framework underpins this process, providing a critical safety net- all escalated cases are promptly reviewed by a nurse, while clients with lower-risk profiles continue to receive chatbot-facilitated support.

This hybrid model ensures that linkages to care are expedited, preventing delays that could lead to complications and allows nurses to focus their expertise on higher-acuity cases, thereby enhancing overall efficiency. Importantly, the chatbot does not replace nursing staff; rather, it augments their capacity by handling routine interactions, data capture, and initial triage. This functionality directly addresses a long-standing challenge in South Africa, where health systems have historically struggled to account for clients who received HIVSS kits and to ensure consistent follow-up on test results and kit utilisation. Capturing every HIVSS interaction from kit distribution to result interpretation within a unified digital record, the AI chatbot enables seamless, verifiable linkage to care for each client, closing the accountability loop and strengthening the continuum of HIV prevention and treatment.

Evidence-Based Outcomes and Lessons Learned

The Shout It Now model demonstrates that moving HIV prevention services out of traditional clinics and into the community, supported by robust digital tools and youth-centric design, can significantly improve PrEP uptake and retention among AGYW. Evidence from similar community-based models confirms that co-located same-day PrEP initiation at mobile clinics significantly increases uptake among AGYW compared to home-based referrals[4,5]. Mobile clinics offering integrated HIV, SRH and GBV services are highly acceptable and facilitate access, especially in locations and times convenient to youth[5,6].

Peer navigator models have proven critical in increasing linkage to HIV prevention and SRH services, leveraging trust and shared experiences to overcome barriers[7,9]. Research on AGYW preferences indicates that they favour diverse PrEP delivery platforms, including mobile clinics, youth clubs, and courier delivery, influenced by privacy, convenience, and social support[10,11]. Research demonstrates that multi-level, integrated interventions addressing biomedical, behavioural, structural, and social factors improve HIV prevention outcomes, with family involvement and peer navigation emerging as critical components[12-14]. Interventions addressing GBV and economic empowerment, such as safe spaces, microfinance, and bundled services, show promise in reducing HIV risk and improving resilience[15-17].

Culturally tailored interventions that incorporate edutainment and youth advisory involvement increase dual protection awareness and engagement[2,18,19]. Research confirms that AGYW favour accessible, non-judgmental formats, including online platforms, SMS, and peer-led approaches, with preferred settings including schools and youth centres[18]. Family-based interventions involving female caregivers have demonstrated improved PrEP uptake and reduced STI incidence, with high feasibility and acceptability[2,20,21].

Out-of-school youth face higher substance use, risky behaviours, and lower service utilization due to stigma, provider attitudes, and lack of structured support[22-24]. Shout Mobile helps reach this hard-to-reach and underserved population. Operational success in community-based mobile HIV prevention depends on adaptability, ongoing training, and robust community engagement. Best practices include integration of peer navigation, continuous stakeholder engagement with youth advisory groups and co-location of services to optimise PrEP initiation[4,5,19,25]. Stakeholder engagement ensures interventions remain youth-appropriate and culturally sensitive, with youth advisory groups and community boards playing vital roles in program design and implementation[7,19,26].

For nurses operating at the community level, this integrated, digitally supported model offers several advantages. It reduces the administrative burden associated with manual data entry and cross-referencing disparate records, allowing nurses to dedicate more time to direct client care and complex decision-making.

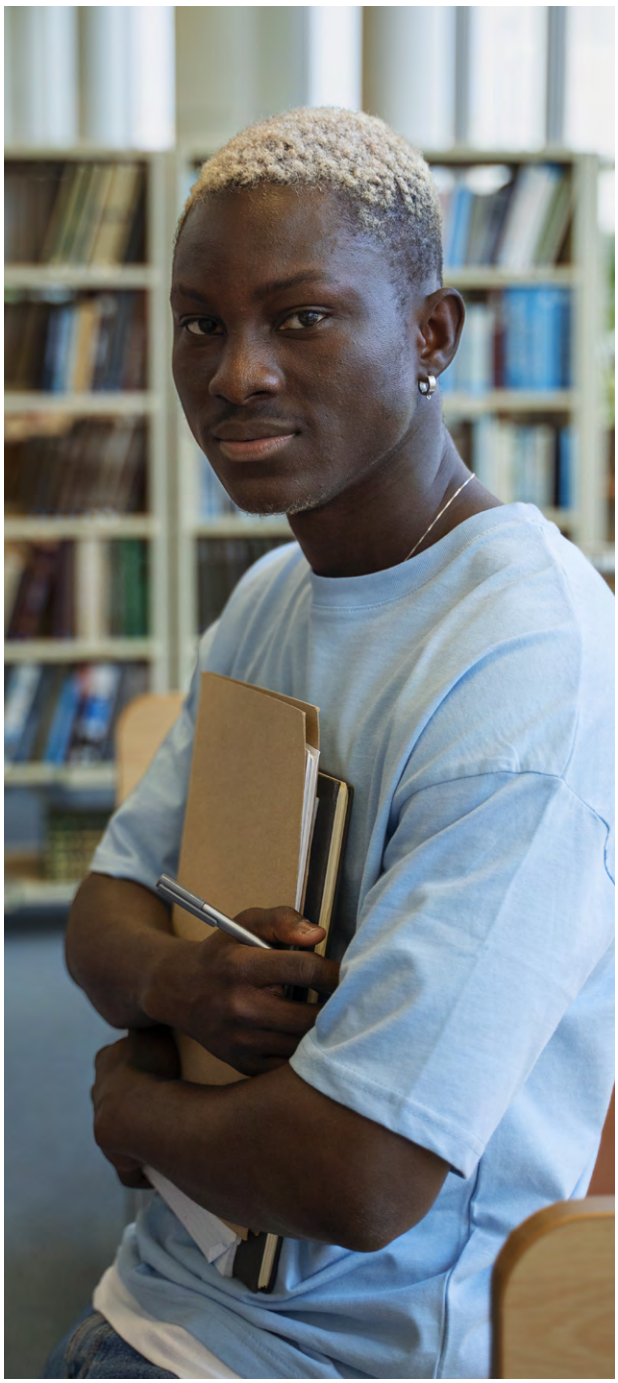
Recommendations for Future Implementation for policy makers, program managers and program implementers

To optimise community-based HIV prevention for AGYW, five priority actions are needed:

1. Combine HIV prevention with SRH services, mental health, Psychosocial support, and GBV response.
2. Invest in youth-friendly, mHealth-integrated platforms to extend reach and retention.
3. Sustain continuous input from youth, families, and communities via advisory groups and peer networks.
4. Develop flexible models to overcome environmental disruptions and sustain peer navigators.
5. Conduct long-term, cost-effectiveness, and scalability studies to guide evidence-driven adaptation.

Practical Guide for Nurses in SRH Services

1. Greet warmly, use plain language, explain confidentiality upfront, and ensure private consultations.
2. Take sexual histories sensitively (Five Ps framework), offer choice in HIV prevention (oral and injectable PrEP, PEP and ARV Initiation), initiate same-day PrEP when appropriate and integrate contraceptive counselling.
3. Listen without interrupting; apply the LIVES model; document factually; and know referral pathways for social work support.
4. Assess selective disclosure needs, clarify consent and minor rights, and use process simulation to maximise counselling time.
5. Proactively introduce the AI chatbot (Self-Cav) for 24/7 support, use digital triage for routine education, and use dashboard data for compassionate follow-up.
6. Leverage social media, Edutainment and youth-led content creation.



Limitations, Research Gaps and Future Directions

Future case study or similar interventions to prioritise rigorous, long-term evaluations of mobile clinic interventions' impact on HIV incidence and behavioural change; cost-effectiveness and scalability studies for integrated, community-based models; simulation models for hybrid interventions combining digital platforms with mobile clinics; and development of standardised operational models to address environmental disruptions and sustain peer navigator engagement. Limited evidence exists on the long-term impact, scalability, and cost-effectiveness of community-based mobile clinic interventions[12,13,27].

Evidence on scalability and cost-effectiveness remains limited, though tailored, scalable models incorporating Wi-Fi, youth-only services, and subsidised food show promise[28,29]. Flexible, person-centred models with simplified monitoring and long-acting options improve adherence, yet integration with STI prevention remains needed[30-32]. mHealth platforms demonstrate potential for improving accessibility, retention, and adherence, but require robust infrastructure and tailored demand creation[10,33,34].

Conclusion and Recommendations

The Shout's model demonstrates that integrated, youth-friendly,

and culturally tailored community-based mobile clinic approaches effectively increase service uptake and linkage to care among AGYW in Gauteng. Multi-level interventions blending biomedical, behavioural, and structural strategies, supported by peer navigation and stakeholder engagement, are critical for success. Addressing socio-structural barriers and leveraging AI for engagement, Shout provides a scalable framework for reaching the most vulnerable populations in high-burden provinces. Shout has proven that young people will access and stay engaged with prevention services when those services are designed on their terms, replacing intimidating facility-based care with a seamless ecosystem of trusted peer networks, integrated digital tools, and nurse-led clinical services. The young people are waiting. What is needed now is the collective will to scale what works, invest in innovation, and place AGYW at the centre of the response.

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Doxy-PEP: What nurses need to know about the new STI prevention tool

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Introduction

Rates of bacterial sexually transmitted infections (STIs), particularly syphilis and chlamydia, have increased globally over the past decade, particularly among men who have sex with men (MSM) and transgender women (TGW) In particular, South Africa's STI burden is high, and many infections are asymptomatic and go undiagnosed or under-treated. This has led to growing interest in additional prevention strategies that can complement existing sexual health services.

One emerging approach is doxycycline post-exposure prophylaxis (doxy-PEP). Post-exposure prophylaxis is a familiar concept in clinical care: it involves taking medication after a potential exposure to reduce the risk of an unwanted outcome. For example, HIV PEP uses antiretroviral therapy after exposure to prevent HIV acquisition, and emergency contraception is used after unprotected sex to prevent pregnancy. Doxy-PEP applies the same principle to bacterial STIs, involving a single 200 mg dose of doxycycline taken as soon as possible (ideally within 24 hours, and no later than 72 hours) after condomless sex to reduce the risk of infections such as syphilis and chlamydia.

Clinical trials have demonstrated that doxy-PEP significantly reduces the risk of syphilis and chlamydia in MSM and TGW, with little to no protection observed for gonorrhoea[1-3]. However, doxy-PEP is not currently included in South African STI guidelines, and international recommendations are still evolving. The World Health Organization is expected to release formal recommendations in 2026, after

which countries will review the evidence and determine whether and how the strategy should be implemented.

As nurses are often the first point of contact in the health system, those working in HIV prevention and sexual health services need to understand what doxy-PEP is, what the evidence shows, and how to respond to client questions.

What is doxy-PEP?

Doxycycline post-exposure prophylaxis refers to taking a 200 mg dose of doxycycline within 72 hours after sexual exposure to prevent certain bacterial STIs.

Clinical trials have shown reductions of approximately[1-3]:

- 70–80% reduction in syphilis
- 70–80% reduction in chlamydia
- Variable protection for gonorrhoea

Most of the available evidence comes from studies among men who have sex with men and transgender women, populations with high STI incidence in those settings.

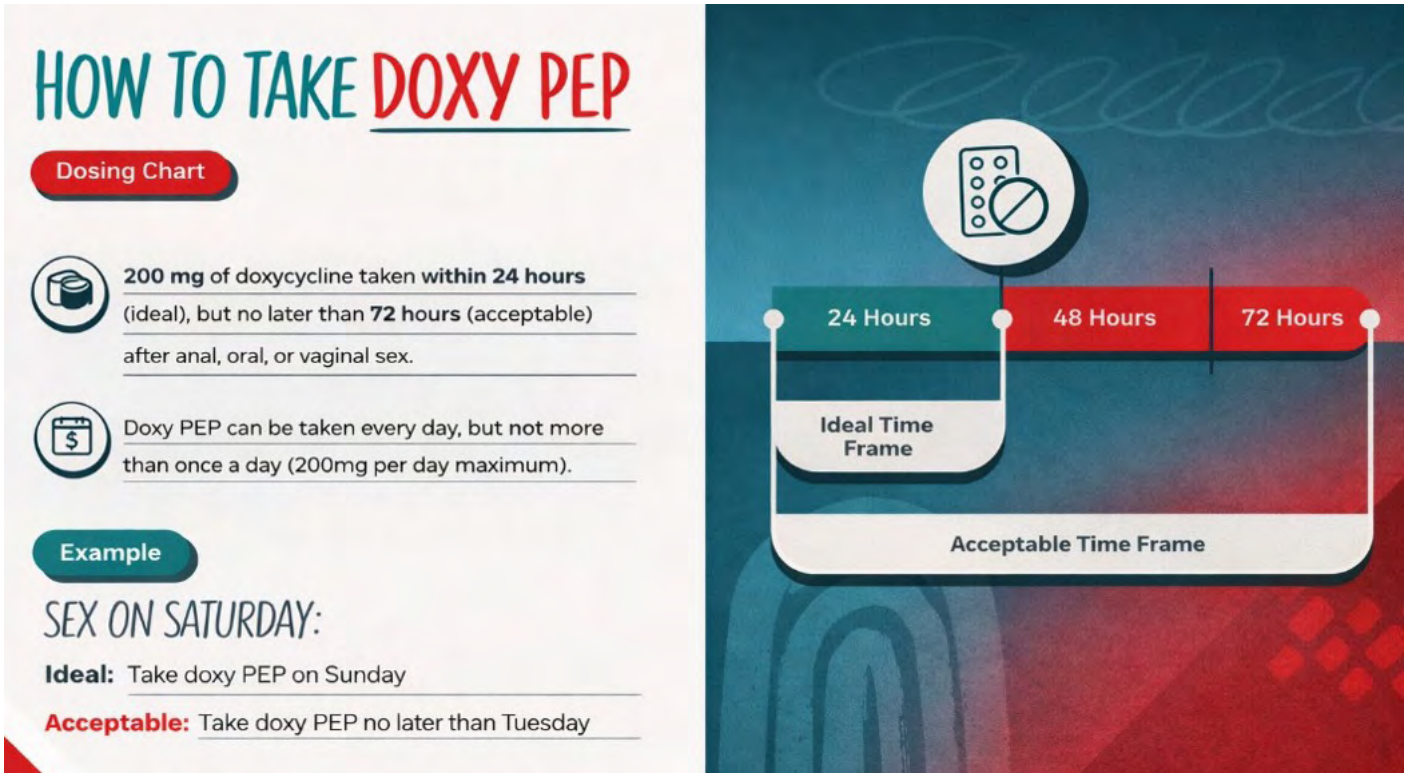
What do we know about doxy-PEP in women?

Evidence for doxy-PEP in cisgender women is currently limited. A randomised trial conducted in sub-Saharan Africa did not demonstrate a reduction in bacterial STIs among women using doxy-PEP, in contrast to the clear benefit seen in men who have sex with men and transgender women[4]. Poor adherence was likely a key contributor to this finding, although biological factors such as drug levels at genital sites may also play a role. As a result, there is currently insufficient evidence to support routine use in cisgender women. Ongoing research is evaluating its effectiveness in different populations and settings, and recommendations may evolve as new data emerge.

Doxycycline is a tetracycline-class antibiotic commonly used to treat a range of bacterial infections, including STIs such as chlamydia and syphilis. It has good oral absorption and is taken as a single 200 mg dose in the context of doxy-PEP. It is generally well tolerated, although gastrointestinal upset and photosensitivity can occur. Absorption may be reduced if taken together with antacids or supplements containing calcium, iron, magnesium, or zinc, and these should be taken a few hours apart. Doxycycline is generally avoided in pregnancy, and alternative management should be discussed with a clinician.

In the South African context, STI and HIV prevention are closely linked. Doxy-PEP may be used in individuals regardless of HIV status, including both those using HIV pre-exposure prophylaxis (PrEP) and those living with HIV on antiretroviral therapy (ART). It should be considered as part of a broader sexual health package that includes HIV testing, STI screening, and appropriate prevention and treatment services.

Figure 1: How to take Doxy PEP.



Source: Adapted from CDC educational materials[1]

Why are guidelines still under review?

While the trial results are promising, several important issues are still being considered before doxy-PEP can be widely recommended:

- Antibiotic resistance, particularly for gonorrhoea
- Limited data in women and other populations
- Possible effects on the microbiome and long-term antibiotic exposure
- Determining which groups might benefit most

In Southern Africa, high levels of tetracycline resistance in gonorrhoea may reduce the effectiveness of doxy-PEP for this infection, making local applicability uncertain[5]. Because of these uncertainties, many countries are waiting for international guidance before incorporating doxy-PEP into national STI programmes.

Box 1: Key messages for nurses

- Doxy-PEP is an emerging STI prevention strategy. It does not eliminate STI or HIV risk
- It involves taking 200 mg doxycycline within 72 hours after sex.
- Studies show strong protection against syphilis and chlamydia.
- Protection against gonorrhoea is less consistent due to antibiotic resistance.
- Most evidence comes from studies in men who have sex with men and transgender women.
- Evidence in cisgender women remains limited, with no demonstrated benefit in available trials to date
- Antibiotic resistance is a concern and rationale prescribing needs to be followed as well as antibiotic stewardship.
- South African guidelines do not currently recommend doxy-PEP.
- WHO guidance is expected in 2026

Box 2: Counselling points

Questions patients may start asking

"Can I take antibiotics after sex to prevent STIs?"
Research studies have shown that doxycycline can reduce the risk of some bacterial STIs when taken after sex, but this strategy is not yet part of routine care in South Africa.

"Is doxy-PEP available in clinics?"
At present, doxy-PEP is not included in national STI guidelines and is not routinely offered in public health services.

"Will doxy-PEP replace condoms?"
No. Condoms remain an important method for preventing STIs, HIV and unintended pregnancy.

In the South African context, STI and HIV prevention are closely linked. Doxy-PEP may be used in individuals regardless of HIV status, including both those using HIV pre-exposure prophylaxis (PrEP) and those living with HIV on antiretroviral therapy (ART).

Counselling on Doxy-PEP

Important counselling points for nurses should include the following:

Doxy-PEP reduces but does not eliminate STI or HIV risk, so continued condom use and HIV prevention is encouraged for high-risk individuals. It does not protect against HIV, hence the need for ongoing HIV PrEP counselling and provision. STI symptoms should still prompt the client to seek care and treatment, as doxy-PEP is not a substitute for treatment. There are side effects of doxycycline and the most common is GI upset (nausea and stomach cramps), therefore it is recommended to take with food and water. Unnecessary dosing of doxy-PEP can contribute to antibiotic resistance, therefore it is important to only take it after sexual exposure. A comprehensive HIV and STI prevention package should be offered to all clients.

Ethical and practical considerations

DoxyPEP is currently an off-label use of doxycycline. Clients should understand this and this can be reinforced during counselling. Shared decision making is important, and it is the nurse's role to inform and support, and then refer to the doctor if the nurse feels that doxy-PEP is indicated. Because of the high-risk group and current evidence only in MSM and TW, it is imperative that stigma-free counselling and support is provided.

Box 3: Antibiotic stewardship considerations

- Avoid routine or unsupervised antibiotic use
- Be aware of local resistance patterns, particularly for gonorrhoea
- Use only within guideline-supported contexts
- Balance individual benefit vs population-level risk
- Reassess need regularly if implemented in future

What should nurses do now?

Nurses should continue to provide standard STI prevention services, including regular screening, condom promotion, prompt treatment, and partner notification. Clients asking about doxy-PEP should be given clear, non-judgemental information. It remains important to reinforce combination prevention strategies, including HIV PrEP, consistent condom use, and regular STI screening. Complex or uncertain cases should be escalated to clinicians where appropriate, and nurses should remain updated as guidance and policies continue to evolve.

Looking ahead

Doxy-PEP is an emerging strategy for the prevention of certain bacterial STIs among high-risk individuals. While early research results from studies involving TGW and MSM are promising, important questions remain and international guidance is still being finalised. For now, doxy-PEP is not part of routine STI prevention in South Africa.

While prescribing sits with the doctors, nurses working in sexual and reproductive health services should be aware of the evolving evidence and be prepared to answer questions from clients, while continuing to focus on established prevention approaches, including regular STI screening, condom use, and prompt treatment within a comprehensive HIV prevention package.

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Providing TB Preventative Therapy for Pregnant Women: A 2026 guideline update

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Introduction

People living with HIV (PLWH) are at significantly higher risk of developing tuberculosis (TB) disease compared with the general population[1]. Globally, an estimated 200 000 pregnant and postpartum women develop TB annually, mostly in Africa and South-East Asia[2]. Pregnant and postpartum women with HIV are even more likely to develop TB disease[3,4].

TB preventative therapy (TPT) lowers the risk of PLWH developing active TB disease, reducing TB/HIV-related illness and death, particularly amongst individuals with advanced HIV disease (AHD)[5,6]. AHD is defined as a CD4 cell count below 200 cells/ml[3] or WHO stage 3 or 4 disease[7]. However, while TPT has become standard of care in HIV services[7], its use during pregnancy is controversial, resulting in several guideline shifts in recent years.

The latest 2026 Consolidated ART Guidelines[8] introduce a more nuanced, CD4-based approach. TPT is now recommended as part of a comprehensive package of AHD care for pregnant women with AHD. For women with CD4>200 cells/mm^3, due to a lower risk of TB disease, TPT should be deferred until the post-partum period. This shift balances the life-saving benefits of TPT for those at highest risk whilst avoiding unnecessary foetal drug exposure and potential related harms in women at lower risk.

TB in pregnancy: why you should remain alert

TB is commonly encountered by nurses working in South African maternity services, and it remains a leading cause of maternal morbidity and mortality in

South Africa[9]. While TB affects less than 1% of pregnant women[10], it contributes to approximately 5% of maternal deaths overall. In 2023, TB accounted for over 40% of deaths due to non-pregnancy related infections (NPRI) in South Africa[9].

TB risk is significantly higher in pregnant women living with HIV due to HIV-related immunosuppression and pregnancy-induced immune system changes[11,12] Most TB disease and TB-related deaths occur in women with AHD[9] Up to one quarter of pregnant women presenting for antenatal care may have AHD[13].

Importantly, diagnosing TB during pregnancy and early postpartum can be challenging. Pregnancy and TB symptoms, like fatigue, weight change and night sweats often overlap making detection more difficult, potentially delaying diagnosis[4,14]. Symptom-based TB screening also performs poorly in pregnant women with HIV, missing many active TB cases[3]. For this reason, South African guidelines recommend a sputum TB NAAT (previously GeneXpert) at the first antenatal visit for all pregnant women with HIV, even if their symptom screen is negative[8]. This helps ensure active TB is excluded before starting TPT in women with CD4<200 cells/mm^3.

If TB disease occurs during pregnancy, it can have serious consequences[12,15]:

Maternal complications:
- Severe illness, death, psychosocial and socioeconomic impacts

Foetal/infant complications:
- Miscarriage or stillbirth, premature delivery, low birth weight, perinatal asphyxia, increased vertical HIV transmission risk, neonatal TB, increased perinatal mortality, long term respiratory issues

TPT kills the dormant TB bacteria, reducing the risk of developing active TB disease.

Preventing TB in higher risk women is, therefore, an essential antenatal care intervention.

What is TPT?

TB preventative therapy (TPT) is given to people who do not have TB disease but may have TB infection.

In high burden countries like South Africa, most people have been exposed to TB bacteria. A healthy immune system can keep the infection under control, preventing disease. However, TB infection may not be completely removed, creating a silent state, with TB remaining like a dormant volcano. However, if the immune system becomes weakened, TB infection may erupt, causing active disease.

TPT kills the dormant TB bacteria, reducing the risk of developing active TB disease.

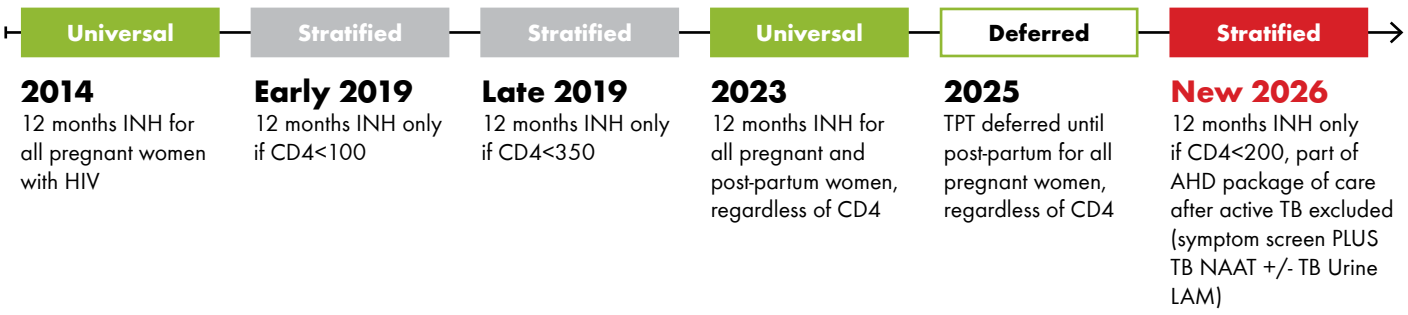
Many studies have confirmed that TPT reduces TB disease and related deaths in PLWH[5,6,16]. Twelve months of isoniazid reduces TB risk by around 37%[5].

The recommended TPT regimen for pregnant women is 12 months of isoniazid (12H) with pyridoxine (vitamin B6). Shorter rifapentine-based regimens (e.g. 3HP) are not currently available for pregnant women due to insufficient safety data.

Why do TPT guidelines in pregnancy keep changing?

The use of medication during pregnancy must always balance potential maternal benefits against possible foetal harm. When the medication is for illness prevention, rather than treatment, an even higher threshold must be met to prove benefit outweighs risk. For TPT, this proof has been difficult to establish because pregnant women were often excluded from studies, leaving us with limited data. This has resulted in multiple guideline changes.

South African Pregnancy-TPT Guideline Changes Over Time



Two important studies helped inform the latest 2026 guideline change.

The TB-APPRISE Trial[12,17,18]

In this multi-country trial women either started on isoniazid during pregnancy or deferred isoniazid until 12 weeks postpartum. In women receiving isoniazid during pregnancy, adverse pregnancy outcomes were 1.7 times more common, including stillbirth/ miscarriage, preterm delivery, low birth and infant weights and early neonatal death.

Summary: adverse pregnancy outcomes may result from isoniazid use during pregnancy.

South African Observational Study[19]

Almost 50,000 cases of women from Cape Town were reviewed. The study found 50% less TB disease when women with CD4 <350 cells/mm^3 received isoniazid during pregnancy. However, women with higher CD4 counts experienced no benefit. Adverse pregnancy outcomes were less frequent in women on isoniazid during pregnancy.

Summary: TB disease occurred 50% less often when women with lower CD4 counts received isoniazid as TPT during their pregnancy.

2026 South African Guidelines[8]

The 2026 CD4-based approach to TPT in pregnancy balances these two study findings.

Box 12: TPT in pregnancy

Pregnant women with advanced HIV disease (AHD) are at significant risk of tuberculosis (TB) and significant risk of tuberculosis (TB) and the associated adverse health outcomes. Recommendations for tuberculosis preventive therapy (TPT) in pregnancy therefore align with those for clients with AHD.

- Pregnant women with CD4 counts ≤ 200 cells/mm^3 should receive 12 months of IPT after exclusion of active tuberculosis disease.
- In pregnant women with CD4 counts > 200 cells/mm^3, IPT should be deferred to the post-partum period.
- In the absence of TPT initiation, continued active screening for TB throughout pregnancy must be prioritised.

This approach ensures women at highest risk receive protection against TB while avoiding potential foetal harm and adverse pregnancy outcomes in lower-risk women. TPT is now integrated into a comprehensive AHD package of care for pregnant women with CD4<200 cells/mm^3.

A Step-by-Step Clinical Guide

Safe implementation of TPT in pregnancy will require a thorough, step-by-step clinical approach (Figure 1). All women attending antenatal care must be screened for TB at every visit, maintaining a high level of suspicion for possible TB, even when the woman is on TPT. All women living with HIV must have a sputum TB NAAT sent during their first antenatal care visit, even if their TB screen is negative. Every woman with HIV must also have a documented CD4 count. If any woman has a positive TB screen **and** a CD4<200 cells/mm^3, a urine TB LAM must be performed. In all pregnant women with a confirmed CD4<200 cells/mm^3, once active TB disease has been excluded, TPT should be initiated. If started during pregnancy, TPT should be given as 12 months of isoniazid 300mg plus pyridoxine (Vitamin B6) 25mg once daily. TPT will be initiated as part of a comprehensive package of AHD care, It will be essential to support and monitor ongoing clinic attendance, optimal adherence and sustained treatment access throughout pregnancy and on into the postpartum period, until 12 months of TPT are complete.

Conclusion

With TB remaining a major cause of maternal death in South Africa, TPT represents an important maternal health intervention. TPT initiation, after carefully excluding active TB disease, is a crucial component of the AHD package of care for women with a CD4 count <200 cells/mm^3. The potential benefit of TPT for women with AHD is significant, outweighing possible foetal/pregnancy risks. Providing TPT to women with AHD will help prevent TB-related poor maternal and infant outcomes.

Figure 1: Step-by-Step Guide to TPT Provision in Pregnancy

Step 1: Universal TB Screening at every visit:

- All women, regardless of HIV status, must be screened for TB
- Cough (any duration), fever, night sweats, weight loss/failure to gain weight
- Maintain a high level of suspicion, TB symptoms can be difficult to detect in pregnancy

Step 2: Routine TB testing for all women with HIV:

- Send sputum for TB NAAT (GeneXpert) at first ANC visit
- Regardless of ART history, CD4 count or pregnancy gestation
- Perform Urine TB LAM if TB symptoms present

Step 3: Confirm CD4 Count:

- Document a CD4 count for all pregnant women with HIV
- If no recent CD4 result available **or** newly diagnosed with HIV **or** woman is restarting ART, request a CD4 count at the first ANC visit

Step 4: Provide AHD Package of Care:

- All women with CD4 <200 cells/mm3 or WHO stage 3 or 4
- Repeat TB screen and confirm negative TB NAAT result, initiate 12 months of isoniazid plus pyridoxine (Vit B6)
- Initiate TB treatment if TB confirmed (remember: 50mg Dolutegravir boost)
- Defer TPT if ongoing clinical concern about TB - investigate further e.g. Chest x-ray
- Start or continue ART **PLUS** cotrimoxazole prophylaxis
- Counsel to help women understand and manage increased pill burden

Step 5: Ongoing Follow-up:

- At **every** antenatal and postnatal visit
- Repeat TB screen - maintain low threshold for TB testing, even if on TPT
- Confirm and support ART, cotrimoxazole and TPT adherence
- Manage vomiting (impacts drug absorption) and side-effects
- Ensure uninterrupted medication supply
- Actively track and trace women with AHD who miss an appointment

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TB screening for pregnant and breastfeeding women

All pregnant and breastfeeding women should be evaluated for TB at every visit

Assess for TB symptoms and assess the woman's clinical condition

If very ill or danger signs:
- Discuss with doctor/refer
- Delay ART initiation until TB excluded/diagnosed to avoid the risk of IRIS, but if already on ART, **do not interupt ART**
- If TBM confiemd, defer ART for 4-6 weeks

No danger signs present

Categorise the woman

WLHV At 1st / Booking visit in ANC
All pregnant women with HIV
(newly diagnosed, known on ART or not yet on ART)

WLHV at any ANC or postnatal follow-up visit

HIV negative women at any visit

Do a TB-NAAT for all, regardless TB symptoms, PLUS other TB investigations as clinically indicated, e.g., urine LAM

Initiate / continue ART (TLD)[2]

Do a TB-NAAT if one or more TB symptoms are present, and any other investigations as clinically indicated

Review results of TB investigations

TB-NAAT negative, but TB symptoms still present

Do further investigations as per TB Guidelines, incl. urine LAM if:
- CD4 < 200 + TB symptoms
- Woman admitted for medical condition, **regardless of CD4**

TB-NAAT positive and/ or other tests confirm a TB diagnosis

Initiate TB treatment
Do not interrupt ART

TB-NAAT negative (or unable to produce sputum) AND no TB symptoms

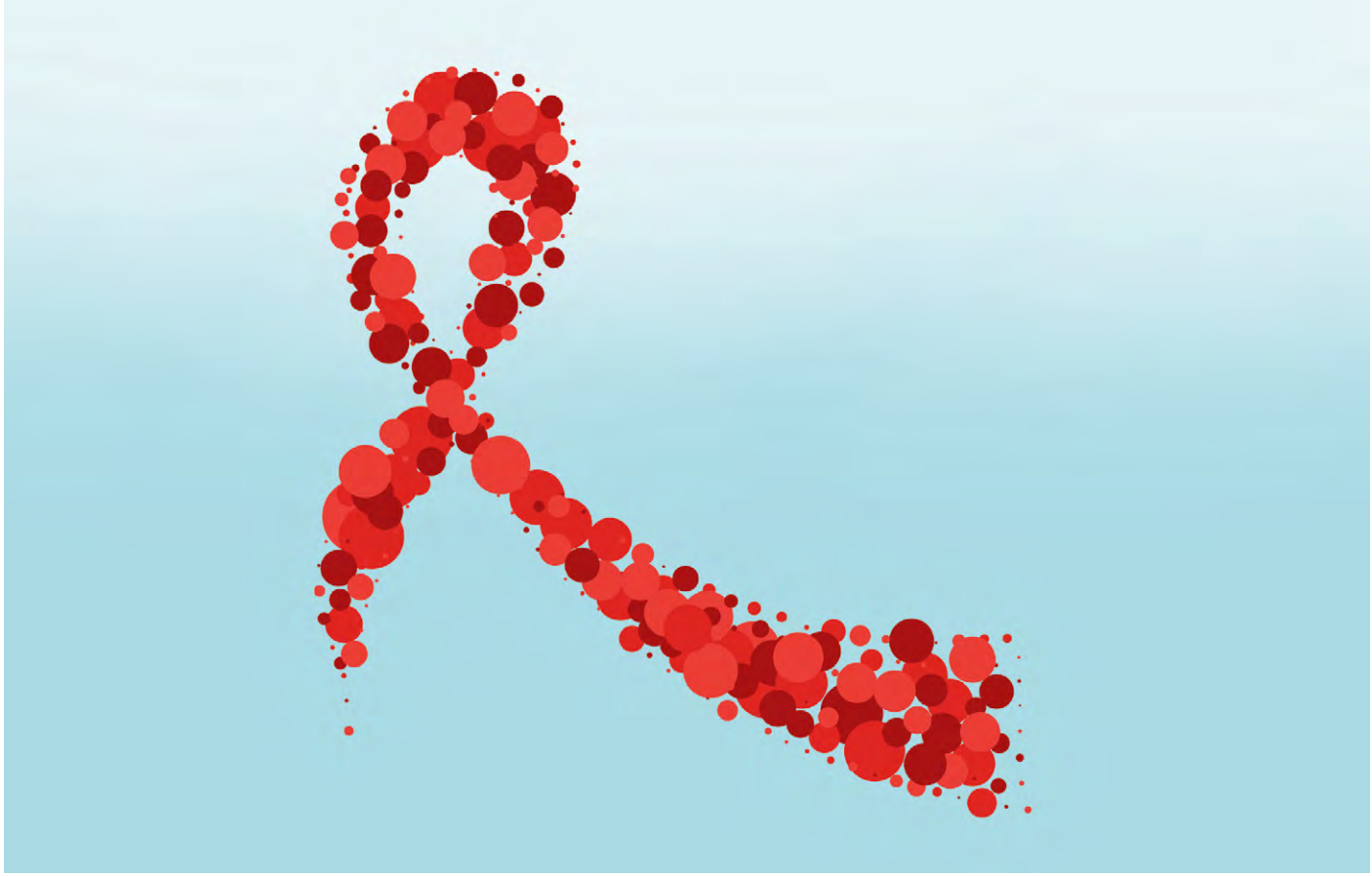
Continue to screen for TB symptoms at every follow-up visit during ANC, at delivery and during breastfeeding. Investigate for TB if symptoms are present.

Review in 2 weeks: If stable and tolerating TB/ART treatment, continue routine follow-up. If unstable/worsening condition, consider possible IRIS and discuss with doctor/refer.

The following women are eligible for TPT:
- Pregnant women with advanced HIV disease (CD4 < 200, or WHO stage 3 or 4)
- Women at the 6-week postnatal visit or any subsequent visit while not pregnant:
  - Any woman with significant TB exposure – regardless of HIV status or any prior TPT completion
  - Any woman with HIV who is 6 weeks postpartum and has never completed TPT previously

1. Give urgent attention to women with any of the following danger signs that may be related to TB:
   - Respiratory rate ≥30 breaths per minute
   - Heart rate ≥120 beats per minute
   - Unable to walk unaided
   - Breathless at rest or while talking
   - Coughs up ≥1 tablespoon of fresh blood
   - Drowsy / confused / agitated / loss of consciousness
2. DTG has drug interactions with rifampicin containing TB treatment. See p. 13 of the 2023 ART Clinical Guidelines.

Source: Adapted from the NDOH Consolidated Guidelines[8]



Practical aspects of Lenacapavir

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Background

Despite the wide availability of oral pre-exposure prophylaxis (PrEP), uptake and persistence remain low, particularly among key populations, due to factors such as limited service access, stigma, and challenges with adherence[1,2]. Long-acting injectable PrEP is a discreet, convenient option that may support consistent use.

Lenacapavir (LEN) is a first-in-class, long-acting HIV-1 capsid inhibitor with an extended half-life, allowing injections to be administered every 26 weeks while maintaining protective drug levels[3]. In two large phase 3 global trials (PURPOSE-1 and PURPOSE-2), LEN demonstrated high efficacy in preventing HIV acquisition compared with daily oral PrEP[4,5]. LEN was generally safe and well tolerated, with most commonly reported side effects being injection site reactions[4,5]. Len was not associated with increased risks of adverse pregnancy or birth outcomes and does not require dose adjustment during pregnancy[4].

LEN targets the HIV capsid and blocks multiple steps in the HIV life cycle, including nuclear import of the capsid, assembly of new virus particles, and their release from infected cells, leading to defective or non-infectious virions[6]. LEN's mechanism is distinct from existing antiretroviral classes and does not share their resistance pathways[6].

This guideline. provides practical instructions for nurses and other healthcare workers on how to counsel clients and administer LEN safely and effectively and is adapted from the National Department of Health Lenacapavir Implementation Guidelines[7]. It supports integration into existing programs in line with South Africa's national HIV prevention priorities and WHO recommendations[8].

Key messages for clients

Explain what LEN is:

- LEN is an injectable PrEP for people who are HIV negative
- It is given as two injections under the skin on the same day, every 6 months

- There are 'booster' pills which need to be taken for 2 days when starting LEN for the first time.

Who can use LEN?
- Adults and adolescents who:
  - Are HIV-negative and want PrEP
  - Weigh ≥35 kg
  - Are willing and able to come back for 6-monthly injections
  - Explain that LEN is safe and effective in pregnancy. *Discuss with a prescriber if pregnancy is planned or newly diagnosed.*

Initiation of LEN:
Day 1:
- Two injections of 1.5 mL each, given into the fatty tissue just under the skin (usually in the abdomen)
- Two LEN tablets (300 mg each) taken orally on the same day.

Day 2:
- Two more LEN tablets (300 mg each) taken orally. Emphasize that tablets must be taken as:
  - 2 tablets on Day 1 (at clinic)
  - 2 tablets on Day 2 (at home)
  - They must NOT take all 4 tablets on the same day, because the body cannot absorb them properly if taken together.
- Thereafter, injections are every 26 weeks with no more tablets if the client comes for their injections on time.

When does protection start?
LEN starts giving full protection on Day 3, if:
  - The client received both injections on Day 1 AND
  - The client took 2 pills on Day 1 AND 2 pills on Day 2.

Clients should use condoms or abstain from sex on Days 1 and 2.

Follow-up visits:
- 1-month follow-up:
  - HIV test
  - Counselling and support.
- Every 26 weeks:
  - HIV test
  - Two LEN injections (no tablets if client comes on time)
  - Counselling.

If the client is more than 2 weeks late, they must restart with the full initiation schedule as above.

Common side effects and how to explain them:
Most side effects are at the injection site and are usually mild and temporary:
- Pain and tenderness
- Redness and swelling
- Small lump under the skin, which can last a few weeks to months after the injection but usually shrinks over time. Explain that the lump is caused by LEN slowly releasing into the body and is not harmful.

Other side effects:
- Headache, nausea, fatigue.

When to seek help:
- Very painful, hot, or worsening redness
- Skin damage, ulcers, signs of infection
- Any worrying symptoms
- Emphasize that most people do well on LEN and serious side effects are rare.

Stopping LEN and the "tail period"
If a client stops LEN:
- LEN levels fall below "protective" levels about 28 weeks after the last injection, but small amounts can stay in the body for 12 months or more
- During this period, if they are exposed to HIV, there is a risk of developing LEN resistance
- If they are at risk for HIV, they should switch to another method (e.g. oral PrEP) and test for HIV every 3 months for 12 months.

Administration of LEN

Before injecting:
- HIV testing (according to national guidelines)
- No signs of acute HIV infection (e.g. fever, rash, sore throat, feeling unwell, swollen glands)
- No exposure in the last 72 hours (assess need for post-exposure prophylaxis)
- Weight ≥35 kg
- Comprehensive care: ask about STI symptoms, pregnancy testing and family planning, where applicable.
- Explain the procedure (see counseling notes above)
- Ask about allergies and previous injection reactions
- Check client is not on medication which can cause drug-drug interactions. Do not start or continue LEN without advice from a prescriber or pharmacist. Consider oral PrEP or alternative, until guidance is given:
  - TB treatment (e.g. rifampicin and rifabutin: need supplemental LEN dosing, rifapentine is contra-indicated)
  - Epilepsy/convulsion medicines (e.g. carbamazepine, phenytoin, phenobarbital: contra-indicated with LEN)
  - Herbal medicines (e.g. John's wort: contra-indicated with LEN).

Prepare LEN and equipment:
Equipment:
- 2 vials of LEN solution (each 463.5 mg in 1.5 mL)

- ensure vials are within expiry date
- ensure solution is clear yellow-brown, no particles, vials intact

- 2 syringes (2.5 mL)
- 2 x 18 G withdrawal needles
- 2 x 22 G, 13 mm safety needles for subcutaneous injection
- Alcohol swabs
- Gauze/cotton
- Sharps container.

Drawing up the dose:

For each vial:

1. Clean the rubber stopper with an alcohol swab and let it dry
2. Attach the 18 G withdrawal needle to syringe
3. Pull up 1.5 mL of air and inject into the vial
4. Invert vial and withdraw the full 1.5 mL of solution
5. Remove the 18 G needle and safely discard it in a sharps container
6. Attach the 22 G, 13 mm needle for injection
7. Remove air bubbles and prime to exactly 1.5 mL
8. Repeat for the second vial.

Note:

- Inject as soon as possible after drawing up
- If not used within 2 hours, discard the dose.

Choosing and preparing injection sites:

Preferred site is the abdomen:

- Recommended positioning: client should lie down on their back
- Highly effective and recommended pain management tip: apply wrapped ice or ice pack to the injection sites for a few minutes before injecting to reduce pain.
- Choose sites at least 5 cm away from the navel and 10 cm between the two injection sites
- Clean sites with alcohol swabs and let dry.

Other acceptable sites (e.g. during second or third trimester in pregnancy):

- Upper outer thigh
- Back of upper arm
- Upper buttocks.

Injection technique:

1. Pinch the skin up to lift a fold of subcutaneous tissue. This is very important to avoid giving the injection too shallow, which increases the risk of ulceration and necrosis
2. Angle of the needle: aim for about 45° into the pinched-up subcutaneous tissue to avoid intramuscular injection, especially in thinner clients
3. For very thick subcutaneous tissue, a 90° angle is acceptable
4. Inject slowly, as LEN is viscous
5. Remove needle and apply gentle pressure with gauze for a few seconds
6. Do not rub the injection sites
7. Repeat the process for the second injection
8. The client should remain lying down for a few minutes to prevent the drug from leaking out.

Immediately after injection:

- Watch the client swallow the two LEN tablets
- Give the client the two tablets for Day 2 in the original container, and:
  - Explain these must be taken 24 hours after today's pills (not earlier, not later if it can be avoided)
  - Encourage setting a phone alarm, if possible
  - If they forget on Day 2, they must take the pills as soon as they remember and use condoms until the day after pills are taken.

Book follow-up visits:

- 1-month visit (HIV test and check-in)
- 6-month injection date.

Reinforce combination prevention and safety messages:

- LEN does not prevent pregnancy or other STIs
- Encourage condom and contraception use
- Return if they have concerns or want to switch methods.

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Additional resources

Reporting of suspected adverse reactions for further monitoring: South African Health Products Regulation Authority (SAHPRA) via the 6.04 Adverse Drug Reactions Reporting Form. https://www.sahpra.org.za/Publications/Index/8

Pregnancy: report any pregnancy outcome for any person exposed to LEN during pregnancy. See Appendix 9: PrEP Pregnancy Outcome Form (7).

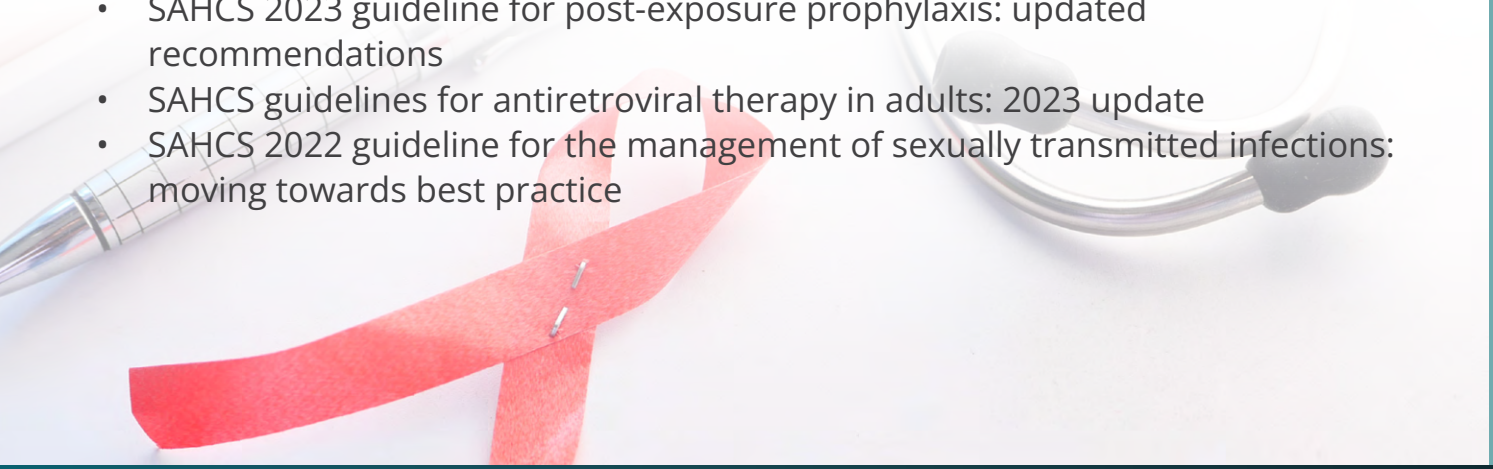
SOUTHERN AFRICAN HIV CLINICIANS SOCIETY **CLINICAL GUIDELINES**

SAHCS' expert committees develop guidelines that provide a comprehensive, evidence-based and pragmatic framework for the management of HIV and HIV-related conditions.

SAHCS guidelines are written to address issues relevant to Southern Africa, and to be helpful to the healthcare workers who use them.

The most recent guidelines include:

- Southern African HIV Clinicians Society clinical guideline for the management of older people with HIV
- SAHCS guideline for the prevention, diagnosis and management of cryptococcal disease among persons living with HIV: Update to induction treatment for cryptococcal meningitis
- SAHCS guideline on pre-exposure prophylaxis to prevent HIV
- SAHCS guideline on the management of non-tuberculous mycobacteria in people with HIV
- SAHCS guideline for the clinical management of syphilis
- Management of drug-induced liver injury in people with HIV treated for tuberculosis: 2024 update
- SAHCS 2023 guideline for post-exposure prophylaxis: updated recommendations
- SAHCS guidelines for antiretroviral therapy in adults: 2023 update
- SAHCS 2022 guideline for the management of sexually transmitted infections: moving towards best practice



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Understanding psychosocial barriers to PrEP uptake: A nurse-led guide for adolescent sexual and reproductive health services

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Background

HIV prevention remains a global health priority, particularly in low- and middle-income countries (LMICs) where new infections continue to occur among adolescents and key populations. Pre-exposure prophylaxis (PrEP) is a highly effective biomedical intervention that significantly reduces the risk of HIV acquisition when taken consistently. Despite its proven effectiveness, the uptake and sustained use of PrEP remain lower than expected in many primary health care (PHC) settings. Recent global analyses indicate that HIV remains a major public health concern, particularly in regions with limited access to prevention services, highlighting the importance of expanding effective prevention strategies such as PrEP within primary health care systems[3,6].

Research shows that barriers to PrEP use are not only structural but also psychosocial. Stigma, misconceptions about PrEP, fear of being perceived as HIV-positive, and concerns about confidentiality can discourage individuals from initiating or continuing PrEP. These psychosocial barriers are particularly significant for adolescents and young people seeking sexual and reproductive health (SRH) services, where social norms, provider attitudes, and privacy concerns can influence health-seeking behaviour[2,33]. Previous studies have also shown that social stigma, discrimination, and negative perceptions about HIV prevention interventions continue to influence attitudes toward PrEP and willingness to seek prevention services[9,21,22].

Nurses play a central role in HIV prevention within PHC systems and are often the first point of contact for individuals seeking SRH services. Nurse-led models of PrEP delivery and task-sharing approaches have been shown to expand access to HIV prevention services while maintaining quality care. Evidence from several settings indicates that nurse-led PrEP programmes can improve service integration and patient-centred care[4,19,23].

Purpose of the article

The purpose of this paper is to explore psychosocial barriers to PrEP uptake in LMIC PHC settings and to provide practical guidance for nurses working in adolescent SRH services on how to address stigma, dispel misconceptions, and support PrEP initiation and adherence.

Methods

This article draws on published literature examining psychosocial barriers to PrEP uptake and adherence, including qualitative studies, mixed-methods research, implementation studies, and program reports published between 2010 and 2024. The review focused on evidence related to stigma, misconceptions about PrEP, confidentiality concerns, structural barriers, and nurse-led models of PrEP delivery in primary health care and sexual and reproductive health services. Particular attention was given to studies involving adolescents and key populations in LMIC settings[1,2,4,5,19,23,26, 33].

Integrated findings

Psychosocial barriers to PrEP uptake and persistence.

Stigma is one of the most significant psychosocial barriers affecting PrEP uptake across different populations and settings. Individuals may experience multiple forms of stigma, including enacted stigma, perceived stigma, anticipated stigma, and internalised stigma. These forms of stigma can influence whether individuals seek information about PrEP, initiate PrEP, or continue using it over time. Adolescents and key populations often experience intersecting forms of stigma related to sexuality, gender identity, and social status, which may further limit access to HIV prevention services[1,2,4,19,23,33]. Research exploring stigma associated with HIV prevention indicates that stigma may operate at multiple levels, including individual beliefs, community norms, and structural discrimination within health systems[12,13,15].

Misconceptions about PrEP also influence decision-making and adherence. Some individuals believe that PrEP causes serious side effects, promotes risky sexual behaviour, or is intended only for specific populations. Such misconceptions can reduce willingness to initiate PrEP and may lead to early discontinuation. Evidence suggests that nurse-led counselling that clearly explains the effectiveness, safety profile, and monitoring requirements of PrEP can help address misinformation and normalise PrEP as part of routine sexual and reproductive health care[1,4,26,33]. Early studies examining the acceptability of PrEP also identified misconceptions about effectiveness, safety, and behavioural implications as key barriers to uptake among at-risk populations[10,16].

Confidentiality and privacy concerns are particularly salient for adolescents and marginalised groups. Adolescents and young people face additional psychosocial challenges that influence PrEP engagement, including concerns about disclosure, stigma related to sexual behaviour, and limited autonomy in accessing health services. Studies involving adolescent girls and young women have shown that mental health, social support, and perceptions of HIV risk can influence adherence to PrEP over time[27,31]. Clinics, packaging, and the potential for social disclosure create fear of stigma and discrimination, deterring PrEP uptake and ongoing engagement with SRH services. Nurse-led approaches that ensure private counselling spaces, discreet service delivery, and clear confidentiality policies are essential components of stigma-informed care in LMIC PHC settings[4,26,33].

Structural barriers, cost, access, stockouts, and health system navigation constrain PrEP uptake in LMIC PHCs. Even where PrEP is available, gaps in financing, supply chains, and youth-friendly service delivery models impede sustained use. Task-shifting to trained nurses, integration of PrEP into existing PHC and SRH services, and the use of community-based or peer-led dissemination strategies have shown potential to address these structural

barriers and expand reach in LMICs[2,4,5,23,33]. Provider attitudes and knowledge gaps, including potential bias or stigma among clinicians, affect PrEP initiation and retention. We find evidence that nurse-led delivery, explained detailing, and provider education can improve patient access and engagement by building trust and reducing perceived judgment in care. These approaches align with broader task-sharing strategies endorsed by international guidelines and supported by LMIC experience where available[5,23,26].

Population- and setting-specific nuances

Adolescents and AGYW in LMICs face unique confidentiality challenges, considerations for parental engagement, and integration needs within SRH services that often operate under resource constraints. Kenya's AGYW experiences underscore the importance of privacy, supportive clinic environments, and integration with post-abortion SRH care to facilitate PrEP uptake and persistence[33]. Female sex workers (FSW) require trusted, confidential, peer-led, community-based PrEP delivery integrated with family planning services to address both HIV risk and reproductive health needs[2]. In other populations (e.g., PWID, GBMSM), recognising and mitigating stigma, while offering nonjudgmental counselling and accessible service options, remains essential for enhancing PrEP uptake and adherence[1].

Interventions and implementation science

Evidence suggests that multi-level interventions yield the greatest improvements in PrEP uptake and retention. At the individual level, stigma-informed counselling, risk communication, and adherence planning are essential. At the provider and clinic level, training, non-discriminatory practice, and inclusion of nurses in PrEP provision are crucial. At the community level, peer support and community engagement help align PrEP services with local needs and reduce external stigma. Policy and health-system supports, such as task-sharing guidelines, supply chain improvements, and affordable PrEP options, are needed to sustain gains. Nurse-led models, including nurse-led PrEP clinics and active-offer PrEP referrals, have demonstrated potential for scaling up PrEP access in diverse settings and should be considered in LMIC PHC contexts[4,5,19,23,33].

Implementation research suggests that effective PrEP programmes often require multi-level interventions that address individual, interpersonal, and structural determinants of health behaviour. These interventions may include provider education, community outreach, digital tools for adherence support, and monitoring systems to track programme outcomes[17,18,30,32].

A Practical Guide for Nurses in LMIC PHC adolescent SRH services

Box 1: Key counselling points for nurses discussing PrEP

- Explain that PrEP is a preventive medication for people who are HIV-negative.
- Emphasise that PrEP is highly effective when taken consistently.
- Address common myths about PrEP, including misconceptions about side effects and risk behaviour.
- Discuss confidentiality and reassure adolescents about privacy in services.
- Encourage shared decision-making and respect patient autonomy.
- Provide clear information about HIV testing, follow-up visits, and monitoring requirements.
- Link patients to peer support or community resources when available.

Adapted from[4,19,23]

Misconceptions about PrEP also influence decision-making and adherence. Some individuals believe that PrEP causes serious side effects, promotes risky sexual behaviour, or is intended only for specific populations.

This guide translates the integrative review findings into a practical, nurse-led care pathway suitable for LMIC PHC settings and adolescent SRH services. The emphasis is on stigma-informed care, correction of misconceptions, patient-centred counselling, and sustained engagement with PrEP within SRH care.

- **PrEP eligibility assessment and shared decision-making.**

Nurses initiate nonjudgmental conversations about PrEP as one option among a full continuum of prevention. PrEP should be normalised as part of routine SRH care for at-risk adolescents, with clear information on modalities (daily oral PrEP, event-driven PrEP where applicable, and long-acting options, as available) and the monitoring required. Address misconceptions directly with concise, evidence-based explanations and provide patient-friendly materials to support informed

choice. This approach draws on nurse-led expansion research and practitioner perspectives on PrEP as an option across diverse contexts[4,19,23].

- **Stigma and psychosocial assessment.**

Incorporate a brief psychosocial assessment into routine SRH visits, including screening for PrEP-related stigma, confidentiality concerns, trauma history, mental health, social support, and recent or ongoing GBV/IPV. Use affirming, non-pathologising language to validate concerns and ensure that any disclosure of violence is met with a first-line supportive response using the LIVES approach (Listen, Inquire about needs and concerns, Validate, Enhance safety, and Support through referral). Identify trusted social supports such as peers, partners, or community organisations, to strengthen adherence, safety planning, and service linkage. This approach aligns with evidence highlighting stigma, psychosocial vulnerability, and violence as important influences on PrEP uptake and continuation, and supports stigma-aware, trauma-informed nursing practice[1,19,23,33].

- **Counselling and information delivery.**

Apply motivational interviewing techniques to explore ambivalence and support autonomous decision-making. Provide brief, focused initiation counselling with clear, accurate information on PrEP efficacy, safety, potential side effects, required monitoring, and what to expect at follow-up visits, including HIV testing, renal function monitoring where indicated, and STI screening. Include a simple adherence plan tailored to the client's daily routine, anticipated challenges, preferred reminders, and follow-up support needs, particularly for clients initiating PrEP rapidly or on the same day. Debunk common myths with brief, practical responses and support counselling with multilingual, literacy-appropriate materials. Emphasise PrEP as a preventive health choice rather than a marker of behaviour or HIV status, to reduce stigma in clinical encounters[4,19,23,26,33].

- **Confidentiality and privacy safeguards.**

Communicate clearly about confidentiality and data privacy, maintain private counselling spaces, and respect patient autonomy in decision-making and disclosure. Adolescents are particularly sensitive to privacy concerns, so clinics should ensure discreet service delivery and staff training in confidential care practices[26,33].

- **Initiation and care planning.**

If PrEP is chosen, engage in shared decision-making about regimen and schedule baseline testing (HIV, renal function, STI screening). Develop a personalised adherence plan aligned with the adolescent's daily life, routines, and available support resources. Provide or refer for additional services such as mental health support, IPV resources, adherence counselling, and peer navigation[4,5].

- **Adherence support and monitoring.**

Use practical adherence aids (reminders, smartphone-based prompts, pill organisers) and tailor strategies to the adolescent's context. Reassess readiness and adherence at follow-up visits and adjust plans as needed. Coordinate ongoing HIV testing and STI screening per guidelines, embedding PrEP within broader SRH services to minimise patient burden[4,5].

- **Health-system and community engagement**

Advocate for stigma-reducing, adolescent-friendly clinics and ensure staff training on cultural humility and unconscious bias. Collaborate with community organisations and peer navigators to enhance access and retention. Support policies that reduce structural barriers (cost, access, clinic hours) and promote integrated PrEP delivery within existing SRH services in PHC settings[4,23,33].

- **Population-specific adaptations**

a. *AGYW*

Prioritise strict confidentiality, consider parental engagement dynamics, and

create safe spaces for SRH and PrEP discussions.

b. MSM, TGW

Use affirming language and address identity-related stigma; adapt settings to be LGBTQ-friendly and consider non-traditional prescribers when feasible. Psychosocial factors such as perceived HIV risk, identity-related stigma, and social support have also been shown to influence PrEP acceptability among men who have sex with men[11,24].

c. FSW

Leverage peer-led, community-based delivery within trusted services; align PrEP with occupational health and safety considerations. Community empowerment approaches and peer-led models have demonstrated promising results in improving PrEP acceptability and uptake among female sex workers in several settings[14].

d. LMIC PHC contexts

Align PrEP delivery with existing PHC strengths, ensure a reliable drug supply, and explore task-sharing with nurses to maximise reach and minimise burden on the health system[2,4,5,33].

- **Practical tools and resources for practice**

Develop and adapt stigma screening tools for local contexts, create concise counselling scripts, and prepare brief education materials for adolescents in local languages. Use checklists that integrate PrEP initiation with HIV testing, STI screening, and SRH services. Establish clear referral pathways to mental health, IPV resources, and community support networks. Train staff with concise modules on PrEP, stigma, and culturally competent care.

- **Implementation considerations for LMIC PHC clinics**

Integrate PrEP assessment and counselling into routine adolescent SRH visits and into school- or community-based outreach, where feasible. Explore nurse-led initiation and follow-up with physician backup for complex cases; leverage task-sharing to expand reach. Implement quality improvement measures that track uptake, initiation, retention, and equity (e.g., differences by age, gender identity, and socioeconomic status). Ensure sustainable PrEP drug supply and affordable pricing, with policy alignment to support integrated service delivery in PHC and SRH clinics[4,5,23,33].

Discussion

This review highlights those psychosocial factors, particularly stigma and misinformation, continue to influence PrEP uptake and adherence in PHC settings in LMICs. Adolescents accessing sexual and reproductive health services may face additional barriers related to confidentiality concerns, fear of disclosure, and social judgement. Nurses play a key role in addressing these barriers by providing accurate information, delivering non-judgmental counselling, and integrating PrEP into routine SRH care. Evidence from several studies indicates that nurse-led models of PrEP delivery can expand access, strengthen patient trust, and support sustained engagement in HIV prevention services[1,2,4,5,19,23,26,33]. Provider training initiatives and public health detailing strategies have also been used to increase awareness and adoption of PrEP among healthcare providers[29]. Ethical considerations in HIV prevention programmes, particularly those involving vulnerable populations such as adolescents and transgender individuals, require careful attention to issues of autonomy, confidentiality, and informed consent[20,25].

Evidence supports nurse-led PrEP expansion, though optimal models vary by country, clinic, and culture. Regulatory restrictions may limit nurses' roles, requiring them to engage with local policies[5,23]. Stigma varies, making culturally tailored interventions essential for effectiveness[1,2,33]. While studies indicate the potential of nurse-led PrEP in LMICs, robust long-term data on adolescent SRH outcomes are scarce, highlighting the need for context-specific research and adaptive designs[4,5,33].

The effectiveness of PrEP programmes also depends on sustained engagement in care. Evidence from several national and regional programmes highlights challenges related to retention in PrEP services and the need for patient-centred approaches that address psychosocial and structural barriers[8,28].

Conclusion

Psychosocial barriers, chiefly stigma and misinformation, substantially influence PrEP uptake and adherence in PHC settings within LMICs, particularly among adolescents seeking SRH services. Nurse-led, task-shifted PrEP delivery integrated into adolescent SRH programs offers a pragmatic and scalable strategy to expand access,

Key messages for nurses

- Psychosocial barriers such as stigma, misconceptions, and confidentiality concerns continue to affect PrEP uptake.
- Adolescents accessing SRH services may be particularly vulnerable to these barriers.
- Nurses are often the first point of contact for PrEP counselling in PHC settings.
- Providing clear information, stigma-aware counselling, and youth-friendly services can improve PrEP uptake.
- Integrating PrEP into routine SRH services can strengthen HIV prevention efforts in LMICs.

normalise PrEP, and reduce stigma within clinical and community environments. A stigma-informed nursing approach, incorporating risk assessment, nonjudgmental counselling, privacy protections, adherence support, and linkage to community resources, can facilitate informed decision-making and sustained PrEP use. The integrative synthesis presented here provides a practical, evidence-informed guide to support nurses in LMIC PHC settings as they implement adolescent SRH PrEP services, while highlighting the need for local adaptation, rigorous monitoring, and equity-focused evaluation.

Acknowledgments: The authors acknowledge the contributions of researchers and program implementers whose work on nurse-led PrEP, stigma, and adolescent SRH in LMICs informed this manuscript.

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Oral PrEP: Common Challenges & Misconceptions

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Background

South Africa has made extraordinary strides in preventing the transmission of HIV. Our most effective method, by far, is the early diagnosis and initiation of antiretroviral treatment (ART). Once a patient's viral load is undetectable, there is no risk of transmission, and our most important prevention program is therefore ensuring all patients who are HIV-infected are on ART[1]. However, we also need methods that empower the HIV-negative patient to stay negative. Although condoms can be effective, there are a host of factors that prove a barrier to regular and correct use[2,3]. In the absence of an HIV vaccine, the next best prevention option has been Pre-Exposure Prophylaxis (PrEP)[4], with both oral tablets and injectables now available as medicines one can take to protect oneself against HIV infection. Taking a daily oral combination tablet of Tenofovir and Emtricitabine (TDF/FTC) is remarkably effective, reducing HIV acquisition by up to 86% with good adherence[4].

The National Department of Health released an updated guideline on oral PrEP in 2021[5], and the Medicine Information Centre has provided information leaflets for clinicians on PrEP initiation and monitoring[6]. However, scaling up PrEP across public-sector facilities in South Africa has been challenging[7,8]. Barriers to implementation include nurses' unfamiliarity with the program, a lack of PrEP-specific training, resource constraints (including medication shortages), infrastructure limitations, and challenges in information management[8]. This article hopes to address some of the concerns, misconceptions and challenges nurses face when prescribing PrEP in a primary health care clinic setting.

Do we need to be concerned about HIV resistance?

As clinicians, we constantly remind our patients of the importance of adhering to treatment. If a patient regularly misses tablets whilst on anti-retroviral treatment, the replicating HIV could potentially mutate into a form that may make it resistant to the treatment that the patient is taking. Patients who are taking PrEP are usually healthy HIV-negative patients, and nurses are correct in assuming that adherence may often be less than perfect. It is important to emphasise that it is only possible for the HIV virus to develop resistance to ARVs if the patient is HIV-positive. A HIV-negative patient does not have any replicating HIV in their bloodstream and therefore is not able to develop mutated, HIV resistant viruses. The biggest challenge with poor adherence to PrEP is that it increases the risk of HIV infection, and patients need to be counselled regarding this. It is therefore perfectly acceptable for patients to only take PrEP during periods of their life where they may be at risk.

Case example: A 19-year-old WSU student, Miss Z, has a boyfriend who is studying in Cape Town. She only sees him in December, when he comes home to Mthatha for the holiday. They have been together for 2 years, but she does not know his HIV status and does not know if he has had other partners while away from home. She enquires whether she can take PrEP only during his visit this December.

Advice for Miss Z: The nurse advises that she can take a short course of PrEP during the 6 weeks her boyfriend will be home. She needs to start TDF/FTC at least 7 days before she will be having intercourse to ensure full protection, continue to take one tablet a day throughout the visit, and continue for another 7 days after her boyfriend returns to Cape Town. Advise her to use condoms to protect against other STIs.

Note: Remember to check Miss Z's HIV test at 6 weeks and 3 months after she has discontinued PrEP.

Do we need to be concerned about PrEP and Kidney Function?

Nurses are aware of the potential kidney risk in patients taking tenofovir and are diligent in monitoring creatinine and eGFR in patients on ARVs. Some nurses are concerned about prescribing TDF/FTC as PrEP to healthy people. However, the risk of Tenofovir to the kidneys is actually very low, especially in healthy young patients[6]. The Medicine Information Centre provides a handy table in their FAQ leaflet that states that routine creatinine monitoring in healthy patients under 30 years of age is not necessary (see Table 1).

Taking a daily oral combination tablet of Tenofovir and Emtricitabine (TDF/FTC) is remarkably effective, reducing HIV acquisition by up to 86% with good adherence[4].

Table 1: Criteria for and frequency of eGFR and sCreatinine monitoring[6] as outlined in the Medicine Information Centre Oral pre-exposure prophylaxis (PrEP) Frequently Asked Questions pamphlet.

Age/pregnant	Co-morbidity	When to do creatinine
<30 years	None	Not required
≥ 30 years	None	Baseline
All (except pregnancy)	Diabetes and/or Hypertension	Baseline and annually
Pregnancy	N/A	Baseline, 3 and 6 months

Case continued: As Miss Z is healthy with no co-morbid conditions, the only baseline tests that she needs are a rapid HIV test to confirm she is HIV negative, Hepatitis B Surface Antigen testing (HBsAg), syndromic STI screening and a pregnancy test.

Note: There is no need to wait for HBsAg test results before starting oral PrEP. If HBsAg is negative, check if Miss Z may be eligible for vaccination. If HBsAg is positive, refer to a doctor for the management of Hepatitis B infection.

Do we need to be concerned about the use of PrEP in key populations and pregnant women?

The South African roll-out of ART has been hugely successful in reducing HIV transmission. However, certain populations are still at a much higher risk of contracting HIV. These include adolescent and young people, men who have sex with men (MSM), people who inject drugs, transgender and gender-diverse persons, sex workers, migrant workers and pregnant and breastfeeding women[5]. The increased risk is partly due to higher-risk behaviours, but the biggest contributor to the HIV incidence in key populations is the lack of engagement with services. Unfriendly staff and discrimination are some of the biggest reasons some of our key populations do not access care, including HIV testing, PrEP and other prevention services[9]. There is an urgent need to make services more accessible to people in our communities who may not always feel welcome in our facilities. The NDOH is in the process of introducing specific programs to improve access of key populations to public sector facilities[10]. This includes youth-friendly programs, walk-in clinics for men, gender affirming health care for transgender and gender-diverse people, and training of staff on harm reduction practices.

There is strong research evidence on the effectiveness of PrEP in key populations[4] and among pregnant women[5]. These are the populations we need to target in our facilities. Any person presenting with a STI, or who requests contraception, or is pregnant/breastfeeding, should be counselled on the availability, safety and effectiveness of PrEP. Creating a safe, non-judgmental space will help facilitate a conversation focused on safety and positive prevention options.

Case continued: Miss Z returns to see you the following year. She and her boyfriend have broken up, and she is currently dating another student in her class in Mthatha. They have not yet had sex and Miss Z is still open to dating other people. She comes to ask you about Depot Provera as a contraception option.

Note: This is an excellent opportunity to discuss the use of long-term PrEP in conjunction with her contraception. This could be either the use of daily oral PrEP or the new injectable 6-monthly lenacapavir.

The biggest challenge with poor adherence to PrEP is that it increases the risk of HIV infection, and patients need to be counselled regarding this. It is therefore perfectly acceptable for patients to only take PrEP during periods of their life where they may be at risk.

Conclusion

Although there is not yet an HIV vaccine available, the use of PrEP provides an excellent method for HIV-negative people at risk to protect themselves against infection. It is safe, cheap, easy to administer and requires minimal visits and monitoring. Every public sector facility needs to be confident in educating patients on the different options and in initiating and monitoring treatment. Many people in our communities are unaware that PrEP is available at their local facilities.

Nurses can be a key driver of this program! Ensure that all your colleagues at your clinic have been trained, put up posters and do patient education in your waiting rooms. We need to start talking about PrEP in our communities, including local schools, community centres, student health clinics and around the dining room table. In addition to our 'undetectable = untransmissible' programs for patients on ARVs, the effective rollout of PrEP can drive our HIV transmission to zero.

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Service Integration in Primary Health Care as a Preventive Strategy to Reduce Patient Waiting Time: A Case Study from Michael Mapongwana CDC

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Introduction

South Africa is facing a quadruple burden of disease alongside an epidemiological transition from predominantly infectious diseases to a growing prevalence of non-communicable diseases[1]. Concurrently, there is increasing evidence of multimorbidity in primary care settings, with patients frequently presenting with co-existing communicable and non-communicable conditions[2,3]. These shifts necessitate a transition from vertical and fragmented, disease-specific models of care towards integrated, holistic, and person-centred approaches. The Integrated Chronic Disease Management (ICDM) model, together with frameworks such as Integrated Clinical Services Management (ICSM) and Ideal Clinic Realisation and Maintenance (ICRM), emphasise the importance of service integration in strengthening primary health care (PHC) systems and improving patient outcomes, access, and efficiency[4-7].

Globally, service integration is recognized as a key strategy for achieving people-centred health systems and improving care for individuals with complex health needs[8]. These health system challenges include prolonged waiting times, fragmented care, and delayed clinical management, which are widely recognized challenges affecting health system performance and patient outcomes[8-11].

This article describes how the implementation of an integrated service delivery strategy at Michael Mapongwana Community Day Centre (CDC) in the Cape Metropole has successfully linked preventive, promotive and curative services, providing them in a single, integrated consultation space and consequently contributed to decreased patient waiting time to less than 3 hours, improved patient flow, quality of care, and staff experience.

Background and problem statement

Michael Mapongwana CDC is a comprehensive PHC facility located in Harare, Khayelitsha. Established in 1994 and operational since 1996, serving a large, diverse and expanding population drawn from informal settlements, Reconstruction and Development Programme (RDP) housing, and formal residential areas. The facility provided a comprehensive and wide range of promotive, preventative, curative and rehabilitative services across the life course, as well as allied health services, and diagnostic services, including HIV/TB/STI (HAST), non-communicable disease (NCDs), HIV prevention, maternal and child health, sexual reproductive health and women's health services (with on-site colposcopy), inclusive of termination of pregnancy and palliative care services. Other provided services include: mens' clinic, mental health, school health, social support and dental health services alongside a 24-hour maternity obstetric unit (MOU) services with onsite birthing registrations.

The catchment population has grown significantly in recent years, particularly during and after the COVID-19 pandemic, increasing demand for services. As a result, the facility operates under sustained pressure, characterized by high patient volumes with a monthly headcount estimate of 22,000. The high demand contributed to operational pressure, limited human resources, and infrastructure constraints, which consequently contributed to long waiting times and pressure on service delivery and inefficient patient flow. These challenges highlighted the need for system-level intervention focusing on a preventive strategy to improve patient flow, reduce delays in service delivery within the facility, enhance continuity of care and improve efficiency.

Historic service structure and the rationale for change

Before the intervention, services were organized into vertical programmes, including separate units for antiretroviral therapy (ART), tuberculosis (TB), and general outpatient care. While

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this model aligned with historical programme priorities, it resulted in challenges such as fragmentation that undermined efficient and patient-centered care. Patients with multi-morbidity were required to attend multiple service points, often on different days, contributing to long waiting times and discontinuity of care. This is inconsistent with evidence suggesting that integrated care enhances patient experiences by creating therapeutic spaces, improving patient access to care, developing collaborative relationships, and person-centered care[12]. From a service delivery perspective, infrastructure was unevenly utilised, and clinical space was not optimally allocated. The physical separation of services limited supervision and coordination, while separate management structures contributed to inefficiencies in staff allocation. Clinicians frequently managed high patient loads, estimated at 40–45 patients per day, which constrained the ability to provide comprehensive, quality care. Furthermore, disease-specific service areas contributed to stigma, particularly for patients accessing HIV services. The organisation of services also failed to reflect the growing burden of multimorbidity, which requires coordination and continuous care. These difficulties provided a strong rationale for transitioning towards an integrated service delivery model aligned with national policy and global PHC principles.

Services integration strategy

The intervention involved adapting and operationalising existing integration frameworks (ICDM, ICSM, and ICRM) within the local context, focusing on reorganising services rather than introducing new resources. The process began with the development of a facility redesign plan, supported by a multidisciplinary steering committee comprising clinical, administrative, and community stakeholders. A central component of the strategy was the establishment of an Integrated Outpatient Department (IOPD), which consolidated previously separate services into a single service platform. This required reorganisation of infrastructure, including increasing consulting rooms from 18 to 21 through the re-purposing of counselling spaces and optimising existing clinical areas. Mental health services were relocated to a quieter area to improve patient experience.

> The Integrated Chronic Disease Management (ICDM) model, together with frameworks such as Integrated Clinical Services Management (ICSM) and Ideal Clinic Realisation and Maintenance (ICRM), emphasise the importance of service integration in strengthening primary health care (PHC) systems and improving patient outcomes, access, and efficiency[4-7].

Clinical practice was reoriented towards integration through workforce development. Clinical nurse practitioners received training in NIMART and the Practical Approach to Care Kit (PACK), enabling them to manage a broad range of conditions. Staff rotation across service areas further supported the development of multi-skilled clinicians capable of delivering comprehensive care.

Operational systems were redesigned to support integration. A single reception system was introduced, requiring the consolidation of patient records into unified folders. An integrated appointment system was implemented to improve continuity and manage patient flow. Triage processes were strengthened to ensure appropriate prioritization of both booked and walk-in patients, while signage and navigation support were introduced to guide patients through the facility.
The intervention aligns with established principles of health system redesign, which emphasise the importance of aligning structure, processes, and outcomes to improve quality of care. The integrated model was implemented on 1 April 2022 following a phased preparation process.

Benefits of integrated health care services

This integration strategy yielded multifaceted benefits at both patient and provider levels, facilitating coordinated care delivery and optimizing the use of available health system resources. Numerous studies have identified health service integration as a beneficial preventive strategy for addressing systemic inefficiencies before they escalate into service delivery failures, particularly in high-burden primary health care settings, with evidence from Western Cape facilities demonstrating that targeted workflow and service delivery interventions can significantly reduce patient waiting times and improve overall quality of care[6, 8,13]. A study conducted in PHC facilities in Cape Town, South Africa, highlighted that the adoption of a service integration strategy significantly reduced patient waiting times through improved workflow organization and patient flow management[14]. The same study found that this approach alleviated service pressure associated with large numbers of patients presenting simultaneously[14], thereby contributing to a reduction in patient complaints related to delayed care[14]. Furthermore, the study demonstrated that structured service reorganization and integration enhanced overall efficiency in service delivery without

compromising the quality of care[14]. In the same vein, the service integration strategy implemented at Michael Maphongwana CDC has played a crucial role in improving patient flow, reducing waiting times, reducing facility congestion, minimizing duplication of services and strengthening coordination across service points. This strategy also reduced clinicians' workload by streamlining patient flow, facilitating task-sharing, and optimizing the use of limited human resources[15], while enabling more efficient service delivery processes and improving coordination between clinical teams. This mitigated staff burnout and enhanced teamwork, thereby strengthening overall facility performance and improving patient experience[6,16]. Moreover, this approach enhanced patients' understanding of available services within the health facility, thereby reducing confusion and miscommunication between patients and healthcare workers. As a result, service delivery became more streamlined, efficient, and patient-centred[17]. Evidence from South African PHC settings indicates that such integrated service models improve coordination, strengthen system responsiveness, and enhance patient satisfaction[17]. Collectively, these findings demonstrate that service integration is a critical strategy for improving both the functionality of health facilities and the overall patient experience in resource-constrained settings. Notably, clinicians also benefited from this approach through enhanced capacity development, as the holistic one-stop integrated service approach necessitated a high level of clinical competence and comprehensive orientation across all service areas, thereby enabling the delivery of coordinated, continuous, and efficient patient care at a single point of service, with improved clinical outcomes and reduced unnecessary delays. Additionally, this approach has led to the implementation of a functional and well-managed appointment system which supports structured planning on a daily, weekly, monthly, and quarterly basis, thereby enhancing continuity of care, optimizing patient flow, and strengthening service delivery efficiency within the facility.

This underscores the vital role of health service integration in improving access, efficiency, and quality of care for patients and highlights the importance of coordinated service delivery within PHC systems, specifically in the South African and Western Cape context, where patients often present with high service demand and complex health needs requiring streamlined, patient-centered care models.

Experiences, lessons learned and challenges during the implementation transition phase

While the implementation of service integration yielded significant improvements in efficiency and patient care, several challenges were encountered during the transition phase. These can be understood better through a health systems lens across four domains: **demand-side (patient-related), workforce (human resources), health information systems, and infrastructure factors,** consistent with the World Health Organization Health Systems Framework[18].

The integration of services resulted in improved patient flow and reduced waiting times, with patients able to access multiple services during a single visit. The integration of HIV and NCD services also reduced stigma associated with disease-specific service areas. **From a demand-side perspective,** increased patient congestion was observed as patients took longer to adapt to new service pathways. Patient adherence to the

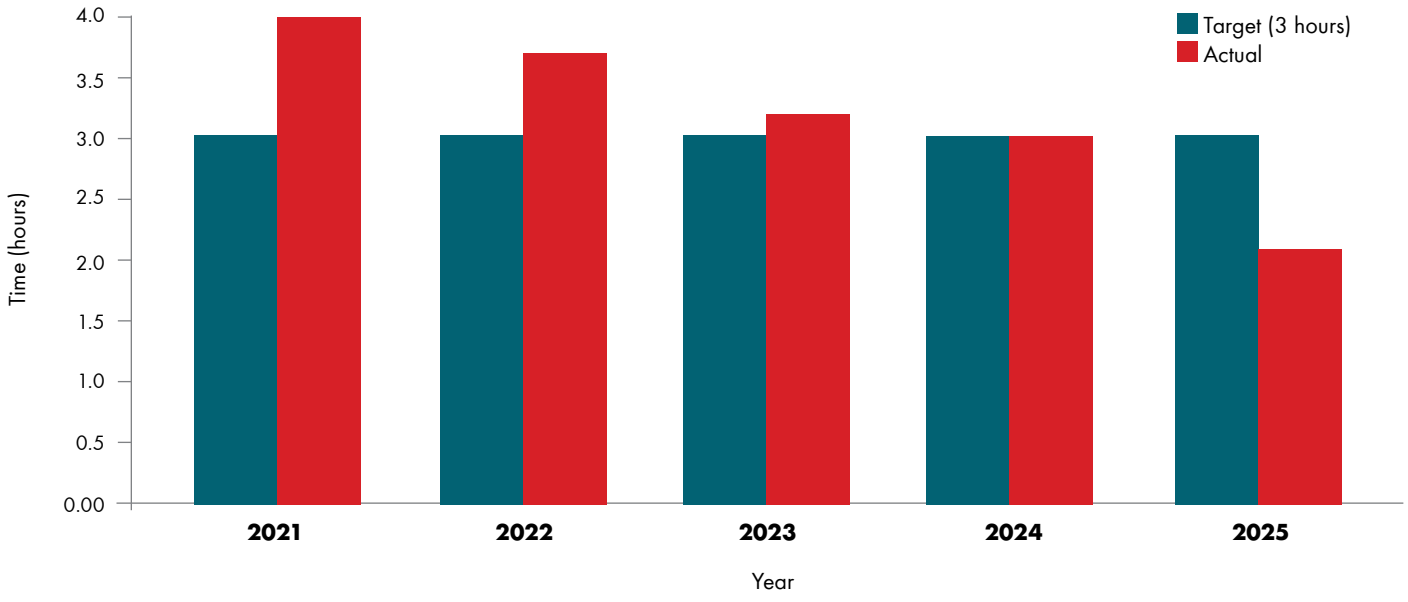
appointment system was inconsistent and rigid scheduling led some patients to continue relying on walk-in services, bypass the booking system and present directly at triage, consequently, increasing pressure on triage areas, and at times resulting in their operation as a parallel service point. From a clinical perspective, the intervention supported a shift towards more holistic, person-centred care. The development of multi-skilled clinicians improved the facility's capacity to manage multi-morbidity, while enhanced teamwork contributed to a more supportive working environment. **Workforce-related** challenges included resistance to change in relation to newly established service delivery practices, as well as adjustment difficulties among four newly appointed Unit Managers who required time to align with revised workflows, processes and ongoing orientation. This highlighted the importance of sustained leadership and change management, consistent with established models of organisational change[19]. These experiences reinforce the understanding that service integration is an ongoing process requiring continuous adaptation and engagement. In addition, challenges were further exacerbated by inefficiencies in **health information systems** and communication gaps regarding the new service model, which contributed to confusion around appointment processes and patient pathways, while **infrastructural** constraints, particularly limited space, also posed challenges in fully optimizing integrated service delivery and patient flow. These challenges highlighted the complexity of implementing integrated models of care and reflected common transitional barriers associated with change management, patient education, effective communication, and adaptive health system reorganization. Additionally, the challenges were largely transitional in nature and represented typical implementation dynamics within PHC reforms rather than fundamental weaknesses of the model itself. The experience further underscored the importance of adaptive implementation strategies, continuous system strengthening, and ongoing stakeholder engagement to support successful service integration.

> Evidence from South African PHC settings indicates that such integrated service models improve coordination, strengthen system responsiveness, and enhance patient satisfaction[17].

Outcomes/results and feedback

The implementation of the integrated model yielded measurable improvements in service delivery and was positively received by both staff and patients. Staff reported improved teamwork, collaboration, and mutual support among different cadres of the team, while patients expressed. satisfaction with receiving coordinated and comprehensive care rather than fragmented services and disconnected services delivered in silos. The graph below demonstrates a gradual improvement in patient waiting times between 2021 and 2025, with actual waiting times steadily decreasing over the years. While waiting times exceeded the 3-hour target in 2021–2023, the facility achieved the target in 2024

Figure 1: Comparison of Target and Actual Patient Waiting Times 2021-2025



Source: Ideal Clinic Data Centre annual performance data (2021–2025)

and further improved performance in 2025 by reducing the average waiting time to approximately 2.1 hours. This trend reflects improved patient flow, strengthened appointment systems, and enhanced efficiency in service delivery.

Recommendations

Service integration should be prioritized as a core strategy in strengthening PHC systems. Given its complexity, careful planning, strong leadership, and organizational commitment are essential. Successful implementation requires alignment between infrastructure, workforce capacity, and operational systems. Transparent communication, sustained teamwork, and active engagement with staff and key stakeholders through continuous consultation are vital. Patient engagement should be strengthened to improve adherence to appointment systems and optimise patient flow.

Ongoing training, mentorship and structured change management strategies are essential to support adaptation to new workflows, while leadership is critical in sustaining change. Facility managers must lead integration efforts collaboratively with administrative teams to ensure adequate alignment of operational systems, including patient flow, appointment scheduling, and health information management, to support integration. Regular meetings and continuous review processes are vital to facilitate the buy-in and address emerging challenges.

In addition, peer learning and knowledge sharing should be encouraged, with facilities benefiting from engagement with experienced sites such as Michael Maphongwana Community Health Centre during the planning and implementation phases.

Conclusion

The implementation of an integrated service delivery model at Michael Mapongwana CDC demonstrated that meaningful improvements in PHC can be achieved through the reorganization of existing resources.

By aligning services with patient needs and the realities of multi-morbidity, the facility improved efficiency, quality of care, and staff experience. This case highlights service integration as a practical and effective approach to transforming clinical practice in resource-constrained settings and contributes to the growing body of evidence supporting integrated, person-centered PHC.

An integrated service delivery model at Michael Mapongwana CDC demonstrates that PHC redesign can function as both a quality improvement and preventive strategy. By addressing fragmentation and improving coordination, the intervention reduced inefficiencies and enhanced patient flow and service delivery. This case highlights the importance of systems thinking and collaborative leadership in strengthening PHC performance within resource-constrained settings.

Figure 2 Appreciation Letter for Service Integration

Western Cape Government

Appreciation for Leadership and Service Integration

Dear Khanyisa

I would like to commend you for your work in integrating adult disease services, acute care, and women and child health services. This approach reflects strong clinical insight and a clear commitment to continuity of care across the life course. Service integration is not easy, and it requires both persistence and leadership. Your work meaningfully improves patient experience and system efficiency.
Thank you for your commitment and willingness to rethink how services are organized.

Please continue to lead and innovate in this space.

Kind regards

Declaration

AI tools were used for language editing and structuring support. The authors are responsible for all content and conclusions presented.

Acknowledgements:

1. MM Clinic Committee
- TAC members
- Mr Stephan Reighact - Infrastructure @ Karlbremer Hospital
- Mrs Steyn – retired
- Dr Biersteker
- Dr Abrahams
- Dr Munganga Ndua
- Mr Efolote Pharmacist
- OPM Maqambayi
- CNP Bashe
- CNP Mancoba
- CNP Mene
- Mr Mpu (Admin Officer)
- Ms Motsieloa (admin clerk)
- Mr Silika (admin clerk)
- All MM staff old and new staff who accepted the initiative.
- All MM patients who have not been difficult to adapt to change.

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When HIV Prevention Is Discussed, U=U Must Have a Seat at the Table

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Introduction

The UNAIDS 95-95-95 targets aim for 95% of people with HIV to know their status, 95% of those diagnosed to receive sustained ART, and 95% of those on treatment to achieve viral suppression[1]. Additionally, the global health frameworks mandate reducing new HIV infections to fewer than 370,000 annually by 2025 and ensuring that 95% of people at risk have access to effective combination prevention options[2]. This will help ensure we stay on track to end the AIDS epidemic by 2030. According to the South African National Department of Health, South Africa had approximately 7.8 million people with HIV as of July 2024, achieving a 96-79-94 status across the entire population served by both the public and private sectors[3]. While HIV testing and viral suppression rates are encouraging, treatment initiation and retention remain major challenges. The Undetectable = Untransmittable (U=U) movement offers a scientifically proven, people-centered approach to closing these gaps. U=U conveys a simple yet powerful message: People with HIV who take antiretroviral therapy (ART) consistently and achieve an undetectable viral load cannot sexually transmit HIV to their partners[4]. The U=U movement is a cornerstone of public health and one of the critical strategies for achieving the goal of eliminating HIV. By shifting perceptions of HIV treatment from an isolated clinical routine to a powerful tool for community-wide prevention, U=U directly accelerates progress toward ending the HIV epidemic.

The Science and the 95-95-95 Targets

The U=U concept is supported by robust scientific evidence. The PARTNER 1, PARTNER 2, and Opposite Attract studies followed couples with mixed HIV status. In these instances, the partner with HIV remained virally suppressed, and no linked HIV transmissions were observed [5, 6]. These findings confirmed that effective ART not only improves individual health outcomes but also serves as a powerful HIV prevention intervention. Additionally, U=U directly supports all three goals. First, the message reduces fear and stigma surrounding HIV testing, encouraging more people to know their status. Second, understanding the benefits of viral suppression motivates individuals to start treatment sooner. Third, U=U strengthens adherence by providing a meaningful, measurable treatment goal: achieving and maintaining an undetectable viral load[7].

Strengthening Access to ARVs and Viral Load Testing to curb HIV transmissions

When an individual adheres to ART and maintains an undetectable viral load, the risk of sexual transmission of the virus is zero[8]. As more individuals achieve viral suppression, the overall community viral load declines, leading to a steep decline in new HIV incidence. Additionally, maternal plasma HIV viral load (VL) is the strongest determinant of vertical HIV transmission[9]. This indicates that viral load assessment in pregnant and breastfeeding women is a critical measure for determining and mitigating transmission risks[10,11]. The World Health Organization reports that HIV viral load test results can motivate adherence to treatment and help achieve the goal of undetectability[12]. To improve access to these tests, decentralizing point-of-care viral load testing can significantly shorten turnaround times and enable faster clinical decision-making[13].

Strengthening adherence counseling during antiretroviral therapy initiation and throughout the treatment journey is essential, including communicating the prevention benefits of viral load suppression to all people with HIV. Furthermore, integrating these services with differentiated care models, such as multi-month ARV dispensing and community-based medicine pick-ups, could help clients maintain lifelong adherence. Importantly, timely initiation and consistent adherence to ART are key predictors of achieving virologic suppression, specifically an undetectable HIV viral load, thereby mitigating a range of clinical, virological, and immunological risks[14]. The HIV Survivors and Partners Network, on its blog, states that by investing in maternal health, supporting treatment adherence, and expanding awareness of U=U, the country can protect future generations and ensure that more children are born HIV-free[15].

Evidence of Impact

Emerging evidence from South Africa underscores the value of U=U messaging. Studies have shown that belief in U=U reduces HIV-related stigma and increases willingness to get tested for HIV. Among men, U=U-centered communication has been linked to higher rates of HIV testing uptake[16]. These outcomes are especially important for underserved populations, including men, adolescents, and young people. Studies report that when men understand that suppressing the virus protects their partners, testing uptake increases significantly, enabling public health channels to identify and treat unreachable demographics[17]. When community testing increases, more people achieve viral suppression, and the overall community viral load declines, ultimately breaking the chain of new infections[18].

Beyond Prevention: Improving Quality of Life

The benefits of U=U extend beyond preventing HIV transmission. The message improves mental well-being, strengthens relationships, and supports client-centered care[19]. Greater awareness of U=U following HIV testing is associated with lower internalized HIV stigma[20]. Furthermore, studies report that the U=U belief is associated with less frequent HIV discrimination, more positive feelings toward people with an undetectable viral load, and lower personal endorsement of stigmatizing beliefs[21]. Importantly, U=U is reported to dramatically reduce the psychosocial burden and anxiety associated with HIV and to free individuals from the constant fear of transmitting the virus to partners, thereby decreasing symptoms of anxiety and depression[22]. This premise holds that families can make informed reproductive choices and that women with HIV can have healthy pregnancies. By promoting dignity, hope, and social inclusion, U=U advances broader public health and human rights goals.
Recommendations for Scale-Up.

To maximize U=U's contribution to achieving HIV prevention targets, countries should continue investing in U=U-based HIV prevention literacy initiatives, especially among couples in mixed-HIV-status relationships and pregnant and breastfeeding women with HIV. There is a need to design and disseminate harmonized national messaging, peer-led support programs, healthcare worker capacity-building, and community-based psychosocial support services. U=U information should be disseminated in plain language and tailored to the needs of different populations, including youth, men, women, and caregivers. Routine viral load monitoring and communication of results remain central components of HIV prevention and care.

The cost of omitting U=U from HIV strategies

Omitting U=U from health guidelines, treatment algorithms, and resource-allocation matrices creates severe systemic blind spots:

- When decision-making tables exclude U=U, they implicitly uphold outdated, punitive policies. This perpetuates HIV stigma and discourages people from getting tested and from staying on treatment.
- Without incorporating U=U into intervention models, governments underinvest in Treatment as Prevention (TasP). This drives up long-term infection rates and strains national health budgets.
- Excluding U=U from official priority-setting frameworks creates a disconnect between

Studies have shown that belief in U=U reduces HIV-related stigma and increases willingness to get tested for HIV. Among men, U=U-centered communication has been linked to higher rates of HIV testing uptake[16].

U=U is one of the most important advances in HIV prevention and treatment in the modern era.

clinical evidence and national health policy, making it harder to secure the political will to fund comprehensive care programs.

Health economic benefits of integrating U=U

Formalizing U=U in health economics and priority setting delivers demonstrable value:

- **Reduction in healthcare utilization:** When U=U is the foundation of HIV programs, viral suppression rates may rise, leading to a direct drop in hospitalizations, opportunistic infections, and drug resistance.
- **Lower cost per infection averted:** Integrating U=U into guidelines could enable collective financing and strategic purchasing, which are far more cost-effective over the long term and reduce the future economic burden on health systems.
- **Economic Productivity:** Clients who achieve viral suppression remain healthy and active, contributing to the labor force by reducing the costs of illness, presenteeism, and premature mortality. U=U not only prevents transmissions but also prevents economic disempowerment and poverty.

Call to Action

To curb HIV transmission, maximize health investments, and support clients, decision-makers must act now:

- **Mandate U=U in guidelines:** Immediately update national clinical guidelines, the health delivery program assessment (HDPA), and quality improvement frameworks to explicitly incorporate U=U across treatment and prevention programs.
- **Revise decision tables:** Ensure that U=U and viral load suppression metrics are treated as primary criteria in cost-effectiveness and cost-benefit analyses for public health funding.
- **Drive public awareness:** Launch aggressive, government-backed public health campaigns to educate communities, healthcare workers, and policymakers about U=U and its role in prevention.
- **Invest in community-led responses:** Invest in and strengthen community-led organizations and networks of people with HIV, recognizing their vital role in delivering stigma-free services, promoting peer-driven treatment literacy, driving demand for HIV prevention, testing, and treatment services, and supporting retention in care[23].

Conclusion

U=U is one of the most important advances in HIV prevention and treatment in the modern era. By combining scientific evidence with community empowerment, U=U can accelerate progress toward the 95-95-95 targets, improve treatment outcomes, reduce stigma, and prevent new HIV infections. Scaling up U=U is not only a clinical imperative but also a strategic investment in ending the HIV epidemic globally. Embedding U=U in core healthcare decision-making is no longer just a clinical fact; it is a social and financial imperative.

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NOTES

Clinical tips

1. See the latest SAHCS 2025 PrEP guidance here: https://sahivsoc.org/Files/SAHCS%20PrEP%20guideline%202025.pdf
2. Ensure that everyone who requests or has an HIV test is also screened for symptoms of other STIs.
3. Antenatal syphilis seroprevalence in SA is increasing. See syphilis guidelines: https://sahivsoc.org/Files/SAHCS%20syphilis%20guideline.pdf
4. Rifampicin markedly lowers concentrations of many drugs: always check co-administered drugs.
5. See latest guidance for Non-Tuberculous Mycobacteria here: https://sahivsoc.org/Files/SAHCS%20NTM%20guideline_2024.pdf
6. PEP can effectively prevent infection in a person exposed to HIV when initiated as soon as possible and at least within 72 h post-exposure.
7. Screen for TB & crypto meningitis prior to ART initiation as these may necessitate delaying ART initiation.
8. PrEP is not a lifelong commitment: clients can start, stop, restart PrEP depending on their lifestyle and requirements.
9. PrEP methods (oral, DVR, CAB-LA) can be switched to accommodate lifestyle changes and the individual's level of risk.
10. See the latest SAHCS 2025 PrEP guidance here: https://sahivsoc.org/Files/SAHCS%20PrEP%20guideline%202025.pdf
11. See the latest SAHCS DILI guidance here: https://sahivsoc.org/Files/SAHCS%20DILI%20guidelines%20-%202024.pdf
12. Risk factors for DILI: concomitant HIV, hep B or C, chronic liver disease, high alcohol intake, malnutrition, low BMI, older age, female sex.
13. First-line anti-tuberculous drugs associated with hepatotoxicity include INH, RIF and PZA.
14. In general, patients with DILI should be admitted to hospital.
15. Always ask at every visit about TB contacts and TB symptoms in all children and their caregivers.
16. A undetectable VL will prevent sexual transmission of HIV. Remember U=U.
17. With DTG dispersible formulations available, most children >3kg and >1mth of age should be on a DTG-based regimen.
18. Always ask about and manage ART side-effects as they can negatively affect adherence.
19. DTG may cause a slight increase in creatinine, this is not a cause of renal dysfunction.
20. See latest ART guidance here: https://www.sahivsoc.org/Guidelines/GuidelinesLandingPage

PrEP – pre-exposure prophylaxis, STIs – sexually transmitted infections, SA – South Africa, PEP – post exposure prophylaxis, TB – tuberculosis, DVR - dapivirine vaginal ring, CAB-LA - long-acting cabotegravir, DILI - drug-induced liver injury, INH - isoniazid, RIF - rifampicin, PZA – pyrazinamide, VL – viral load, DTG – dolutegravir, ART – antiretroviral therapy.

Please contact valencia@sahivcs.org if you would like to receive our monthly clinical tips

where to go

National HIV & TB Health Care Worker Hotline

This is a free service for all health care workers

What questions can you ask?

The National HIV & TB Health Care Worker Hotline provides information on queries relating to:

- Pre-exposure prophylaxis (PrEP)
- Post exposure prophylaxis (PEP)
- HIV testing
- Management of HIV in pregnancy
- PMTCT
- Drug interactions
- Treatment/prophylaxis of opportunistic infections
- Drug availability
- Adherence support
- Management of DS and DR tuberculosis
- Antiretroviral Therapy (ART):
  - When to initiate
  - Treatment selection
  - Recommendations for laboratory and clinical monitoring
  - How to interpret and respond to laboratory results
  - Management of adverse events

We are available Monday to Friday 08:30 - 16:30

PHONE
0800 212 506
021 406 6782

E-MAIL
pha-mic@uct.ac.za

SMS/PLEASE CALL ME/WHATSAPP
071 840 1572

WEBSITE
www.mic.uct.ac.za

FACEBOOK
HIV & TB Health Care Worker Hotline, South Africa

FREE ANDROID & APPLE APP
SA HIV/TB Hotline

MEDICINES INFORMATION CENTRE

JOIN US AS A MEMBER!

WE ARE A COMMUNITY OF HEALTHCARE PROVIDERS DEDICATED TO DELIVERING EVIDENCE-BASED, HIGH-QUALITY HIV CARE

The Southern African HIV Clinicians Society (SAHCS) is a community of healthcare professionals that work in a variety of spaces, including public, private, and allied healthcare organisations. Our commitment lies in empowering our community to deliver evidence-based, up-to-date, and patient-centred HIV healthcare of the highest quality.

We strive to support and strengthen the capacity of our members. We achieve this through the development of our clinical guidelines and job aids, offering training courses and conferences, publishing the SAJHIVMED scientific journal and the HIV Nursing Matters publication, organising regular Continuous Medical Education meetings and webinars. We are dedicated to fostering collaboration across cadres and borders to improve the lives of all those affected by HIV.

As a member of SAHCS, you will have ongoing access to trusted clinical knowledge, enabling you to enhance your clinical practice and provide high quality HIV prevention, treatment, and care.

SAHCS MEMBERSHIP BENEFITS INCLUDE:

- Free access to CME meetings and webinars
- CPD certificates for courses and webinars completed
- Free access to previous webinars to enable you to learn when it suits you
- Preferential registration to SAHCS workshops
- The opportunity to network and collaborate with other healthcare providers who have an interest in HIV
- Free access to:
  - the DHET PubMed® accredited Southern African Journal of HIV Medicine (SAJHIVMED)
  - SAHCS HIV Nursing Matters Publication
  - HIV and related diseases clinical updates and articles
  - Evidence-based SAHCS and NDoH clinical guidelines

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