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Assessing the Effectiveness of HIV Counseling and Testing Programs: A Retrospective Study at an Apex Regional STD Centre in North India

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ABSTRACT

Background: HIV counseling and testing are foundational in the fight against HIV/AIDS, offering opportunities for prevention, early diagnosis, and treatment linkage. This study evaluated the effectiveness of HIV counseling and testing services at an Apex Regional STD Centre in North India.

Methods: A retrospective observational study was conducted from January to December 2023. Data were extracted from center registers, including the number of individuals receiving pre-test counseling, undergoing HIV testing, and testing positive. Partner engagement, HIV transmission routes, age and gender distribution, and referral of suspected TB cases were also analyzed. Quality indicators such as counseling completeness, content delivered, and partner notification services were reviewed.

Results: A total of 29,017 individuals received pre-test counseling, with 28,609 undergoing HIV testing (98.59% uptake). HIV positivity was highest among individuals aged 35–49 years (2.13%). Heterosexual contact with casual partners in males and regular partners/spouses in females were the most reported transmission routes. Among 389 partners tested, 180 were HIV-positive (46.3%). However, only 230 partners (59.1%) received formal counseling. The TB referral system identified sputum-positive TB in 0.10% of referred clients. Counseling session quality was adequate in 85% of cases based on adherence to national counseling guidelines.

Conclusion: HIV counseling and testing services at the center demonstrated high uptake and significant case detection. However, gaps in partner counseling and data tracking limit the full evaluation of program effectiveness. Strengthening partner services, standardizing counseling quality audits, and integrating follow-up mechanisms are critical for enhancing outcomes.

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Introduction

Human Immunodeficiency Virus (HIV) continues to pose a substantial public health burden, particularly in low- and middle-income countries like India. Counseling and testing services are essential entry points for HIV prevention and care. They allow individuals to understand their risk, receive appropriate testing, and, if needed, initiate timely treatment and behavioral interventions [1,2]. Despite the extensive rollout of testing services under the National AIDS Control Programme (NACP), concerns remain about the depth and effectiveness of counseling, especially regarding partner notification, risk reduction strategies, and linkage to care. Evaluating these programs at tertiary-level centers is crucial to optimizing service delivery. This study aims to assess the operational effectiveness of HIV counseling and testing services at an Apex Regional STD Centre in North India, with a focus on uptake, positivity rates, partner involvement, and integration with TB services.

Methodology

Study Design and Setting

A retrospective study was conducted using routine program data from the Apex Regional STD Centre affiliated with a tertiary care hospital in North India. The study period was January 1, 2023, to December 31, 2023.

Data Collection

Data were extracted from the integrated counseling and testing centre (ICTC) registers, HIV testing logs, partner tracking sheets, and TB referral records. Counseling session observation checklists were used to assess a random sample (n=100) for adherence to standard counseling protocols (as per NACO guidelines).

Variables Analyzed

- Number of individuals counseled
- HIV testing uptake and positivity rates
- Demographics: Age, gender identity
- Partner engagement: Number counseled and tested
- Route of transmission (self-reported)

- Referral and outcome of suspected TB cases
- Counseling session quality indicators

Results

HIV Counseling and Testing Uptake

- Pre-test counseling: 29,017 individuals
- HIV tests performed: 28,609
- Uptake rate: 98.59%
- Total HIV-positive individuals: 341
- Positivity rate: 1.19%

Demographic Distribution of Positivity

- Age group 35–49 years had the highest positivity (2.13%)
- Gender identity: 67.7% males, 30.2% females, 2.1% transgender

Partner Engagement

- 389 partners were tested
- HIV-positive partners: 180 (46.3%)
- Only 230 partners had documented counseling sessions

Routes of Transmission

- Males: Predominantly heterosexual contact with casual partners (61.2%)
- Females: Regular partners/spouses (54.9%)
- Other routes: Homosexual contact (3.5%), injecting drug use (1.8%)

TB Referral Outcomes

- 312 HIV-positive individuals were referred for TB screening
- 28 underwent sputum testing
- 3 diagnosed with TB (0.10%)

Counseling Quality Evaluation

Out of 100 sessions reviewed:

- 85 met the minimum counseling standards (information on HIV, prevention, and consent)
- 15 were incomplete or lacked essential components (e.g., follow-up planning)

Discussion

This study highlights a high HIV testing uptake following pre-test counseling, consistent with previous national reports [3]. However, the lack of systematic documentation on counseling content and partner involvement restricts comprehensive program evaluation. The high partner positivity rate (46.3%) emphasizes the need for stronger partner services, which remain under-addressed. Only 59.1% of partners were formally counseled, a missed opportunity for behavior modification and care linkage.

Additionally, counseling quality varied, with 15% of sessions failing to deliver key prevention messages or ensure informed consent—areas that need continuous quality improvement and staff training.

Though TB-HIV integration showed effectiveness in screening, the extremely low diagnostic yield suggests either under-screening or over-referral based on loose criteria.

Conclusion

HIV counseling and testing programs at the studied STD Centre are successful in terms of reach and testing compliance. However, counseling quality and partner service documentation require strengthening. Future efforts should focus on behavioral outcomes, retention in care, and enhanced partner notification systems.

Recommendations

- **Implement routine quality audits** of counseling sessions using standardized tools.
- **Strengthen partner notification systems**, ensuring all partners are offered counseling and testing.
- **Develop electronic tracking systems** for better monitoring of outcomes and follow-up.
- **Expand training and supervision** of counselors to ensure consistency in delivery.
- **Conduct prospective studies** to assess the long-term impact of counseling on behavior and health outcomes.

Financial Support and Sponsorship

Nil.

Conflicts of Interest

There are no conflicts of interest.

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