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Integration of NCD Services in a Faith Based HIV Program in Kenya: Retrospective Study of AIC Kijabe Mission Hospital NCD-HIV Integration

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BACKGROUND / INTRODUCTION

- Advancements in HIV treatment have led to increased life expectancy among people living with HIV (PLHIV), with a notable rise in the prevalence of non-communicable diseases (NCDs) within this population.
- The coexistence of HIV and NCDs presents complex challenges, including overlapping risk factors and potential interactions between treatments.
- Fragmented care compromises access to screening, diagnostic work up, treatment and support for PLHIV with NCD comorbidities.
- There is need for integrated care approaches to ensure comprehensive management that addresses both infectious and chronic conditions, ultimately improving health outcomes and quality of life for PLHIV and beyond.
- We sought to describe the process and outcomes of integrated NCD-HIV services at AIC Kijabe Hospital, a faith-based hospital supported by the Christian Health Association of Kenya.

METHODS

- Study design: Retrospective dynamic cohort.
- Study Period: January 2022-December 2023.
- Study Location: AIC Kijabe Hospital, Kenya.
- Data: De-identified patient-level data.
- Data source: Medical records from KenyaEMR and facility EMR.
- Inclusion: All records of patients in care, both PLHIV and non-PLHIV.
- Study variables: Number identified with NCD, with NCD controlled, and were virally suppressed; primarily focused on diabetes and hypertension.
- Sample: 1,035 records reviewed among PLHIV, 10,600 records among HIV-negative population.
- Data analysis: Descriptive data analysis.
- Stepwise integration process:
    - Facility management and administration engagement: establish goodwill, commit human and financial resources.
    - Provider and patient sensitization of intended integration; informal provider and client appraisal of integrated services.
    - Provider training and mentorship on integrated NCD/HIV services (guidelines, protocols, SOPs, reporting).
    - Infrastructure: expansion of waiting bay and consultation rooms, computers and networking.
    - Reorientation of patient flow and navigation.
    - Defined information flow: dual system of KenyaEMR with PLHIV/NCD module, facility EMR for non-HIV patients, centralized reporting of NCD and HIV data.
    - One-stop-shop model: co-location of NCD/HIV services, integrated care pathways including internal referral pathway for complicated cases, and linkage to psychosocial support groups, nutritional counseling and support.
    - Renamed the HIV clinic to Family Medical Clinic, with better signage to appeal to non-HIV clients.
    - Community engagement: peer led NCD support groups, use of religious leaders and fora for targeted NCD messaging.

How will we be interacting with other patients, who do not have HIV without our status being revealed?
~Concerns of a patient about integration

RESULTS

A total of 1,035 PLHIV records were reviewed, with a mean age of 45 years (SD 12.9), whereas among PLHIV with any NCD the mean age was 52 years (SD 10.6). There was no data on NCD prevalence at baseline. The overall NCD prevalence was 18.3% (190, n=1,035). Other NCDs identified among the PLHIV cohort included: Chronic obstructive pulmonary disease-5 (0.4%), cancers-3 (0.3%), chronic kidney disease-3 (0.3%), hyperlipidemia-10 (0.8%). A further 3.1% (n=32) PLHIV had multiple comorbidities with hypertension-diabetes being the commonest dual comorbidity at 68% (22, n=32).

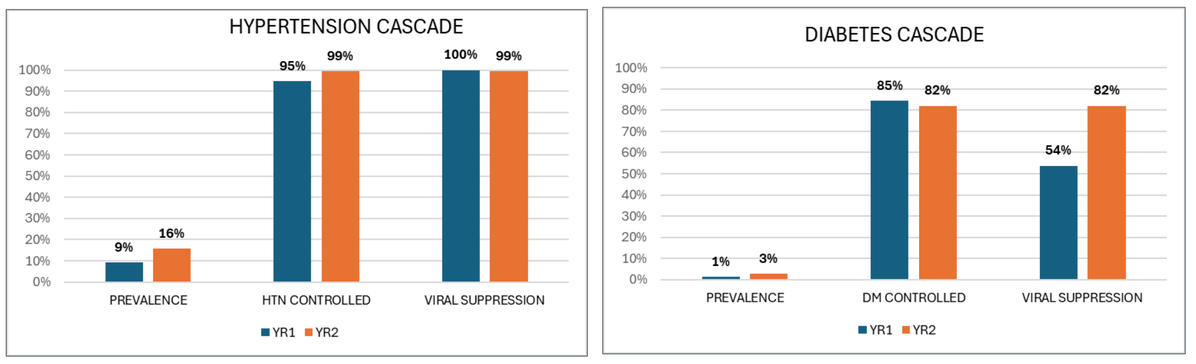

Figure 1: Annual comparison of PLHIV NCD prevalence, control and viral suppression

Patients without control of their NCD comorbidity and with viral non-suppression were offered intensified client-centered counseling and support. A further 6,635 and 10,600 HIV-negative clients were served in the HIV clinic post integration by 12 and 24 months, respectively.

Integration Challenges	Mitigation Measures	Overall Perception on Integration
PLHIV concerns of possible inadvertent disclosure and stigma	Continuous client education, HIV clinic renamed to reflect all-encompassing service	Patient: Good acceptance and satisfaction; benefits of reduced time spent in the hospital, perceived better quality of service due to the on- stop-shop approach.
Initial health care provider lag, increased workload	Provider engagement and training, HHR optimization, patient flow reorientation	
Inadequate space at the HIV clinic	Refurbishments to create extra rooms and expanded waiting bay	Provider: Good acceptance, feels part of the hospital system unlike siloed HIV clinic

DISCUSSION

- Providers were oblivious of the burden of NCD among PLHIV pre-integration, with resultant improved NCD case identification and management post integration.
- There was a high overall prevalence of NCDs among PLHIV, with hypertension as the leading comorbidity.
- There was a notable population of PLHIV with multiple NCD comorbidities.
- Comorbidity control on treatment for PLHIV with diabetes was poorer in comparison to those who had hypertension.
- Viral suppression was poorer for PLHIV with diabetes in comparison to those who had hypertension. There was sustained suppression among the PLHIV with hypertension, with suppression improving over time with intensified support for PLHIV with diabetes. PLHIV with diabetes need a more focused and intensified support to achieve control and suppression.
- An integrated approach is critical to address the complex social, psychological and medical issues surrounding NCD-HIV co-existence; offering the platform for improved case identification, management and patient-level outcomes.
- Adopting a person-centered approach to healthcare delivery that considers the diverse needs and complexities of individuals living with HIV and NCDs is essential.