



13th National Health Forum

9th of April 2025

Abstract book



MINISTRY OF HEALTH

Foreword

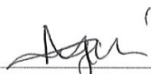
Maseru April 2nd, 2025

Welcome to the 13th National Health Research Symposium of Lesotho, held under the theme *"Strengthening Research and Innovation for Resilient Health Systems and Universal Health Coverage."*

This symposium highlights the critical role of research and evidence in guiding effective health policies. Locally conducted research is essential to ensure that our strategies are relevant and responsive to Lesotho's context. Strengthening research capacity among Basotho is equally important as we work toward a more resilient and equitable health system.

I would like to thank our sponsors, partners, and all organizers who contributed to making this event possible. A special appreciation goes to the National Health Research and Ethics Committee (NHREC) for their leadership in coordinating the symposium. The abstracts presented here and those included in this booklet were assessed by two independent reviewers per abstract, ensuring both impartiality and quality in the selection process.

This symposium reflects meaningful progress in health research within Lesotho. I encourage continued collaboration, inquiry, and the use of local evidence to inform the future of our health system.



Dr. 'Makhoase Ranyali – Otubanjo
Director General Health Services
Ministry of Health

Acknowledgements

The National Health Research Ethics Committee (NHREC) wishes to thank SolidarMed Lesotho and the Government of Switzerland for supporting and sponsoring this important scientific endeavor. It is a priority for NHREC to ensure that findings from local studies are shared with communities, clinicians, and scientists in Lesotho as well as a global audience. We thank you for technical and financial support.

NHREC wishes to acknowledge the tireless work of the Research Coordination Unit and its officers within the Ministry of Health. Your dedication and attention to detail is noted and appreciated. Special thanks to Mr Mathaha Makoe for his efforts in coordinating this forum. All Ministry of Health officials and officers are acknowledged for their support.

NHREC wishes to acknowledge the contributions of members of the Committee to ensure scientific rigor and ethical conduct within all studies undertaken in Lesotho. Thank you for thoughtful reviews and feedback.

NHREC acknowledges the efforts of researchers at all levels to conduct high-quality ethical research in Lesotho, to advance science and to improve the health and well-being of Basotho. You are to be commended and encouraged. Keep up the good work!

NHREC also acknowledges the vital contributions of research participants, their families and their communities. Without you, none of the work presented here today would have been possible. Thank you!

A handwritten signature in black ink, appearing to read 'J. Sanders', with a long horizontal flourish extending to the right.

Jill Sanders, MD, MPH
Co-Chair National Health Research Ethics Committee

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Agenda of the National Health Research Symposium

Agenda		
Opening Session (Chair: Director Health Planning and Statistics)		
Time	Activity	Responsibility
08:00- 08:45	Arrival & Registration	All
08:45- 09:00	Opening Prayer	Volunteer
09:00-09:15	Delegation/ Dignitaries welcome	PS Health
09:15-09:25	Welcome address	DGHS -Chairperson NH-REC
09:25-09:35	Welcome address by Embassy of Switzerland	Deputy Head of Mission, Embassy of Switzerland
09:35- 09:45	Welcome address by Chief Guest	Honourable Minister of Health
Oral Presentation Session (Chair: NHREC)		
Time	Title	Presenter
09:45- 09:55	Enhancing the treatment of pre-extensively drug-resistant tuberculosis: results of the endTB-Q randomized clinical trial	Kunda Kwabisha Mikanda, Partners in Health
09:55- 10:00	Questions and Answers	
10:00- 10:10	Same-day antiretroviral therapy initiation in people with HIV and presumptive tuberculosis: a randomized, non-inferiority trial in Lesotho and Malawi (SaDAPT)	Blaise Lukau, SolidarMed & University of Basel
10:10- 10:15	Questions and Answers	
10:15- 10:25	The Viral load Cohort North-East Lesotho (VICONEL): Cohort description, test volumes, predictors of viraemia and the road ahead. and: Acquired Dolutegravir Resistance in Treatment-Experienced People With HIV in Lesotho	Blaise Lukau and Lipontso Motaboli, SolidarMed & University of Basel
10:25- 10:30	Questions and Answers	
10:30- 11:00	Tea/Coffee break	
11:00- 11:25	Community-Based Chronic Care Lesotho (ComBaCaL) – first results: - Profile of the Community-Based chronic Care Lesotho (ComBaCaL) cohort: chronic disease prevalences and risk factors in rural Lesotho Community Health Worker-led versus facility-based hypertension and diabetes care in rural Lesotho: two cluster-randomized trials within the Community-Based chronic Care Lesotho cohort	ComBaCaL team, SolidarMed & University of Basel
11:25- 11:30	- Questions and Answers	
11:30- 11:40	Persistently high HIV positivity and death rates among children born to HIV positive mothers: Findings from a national PMTCT program evaluation in Lesotho	Tlohang Moeketse, ICAP at Columbia University, Lesotho
11:40- 11:45	Questions and Answers	

Rapid Fire Oral Presentation Session (Chair: NHREC)		
For each presentation: 5min presentation – 3 min questions and answers		
Time	Title	Presenter
11:50 - 11:58	Tolerability of Lopinavir Versus Dolutegravir for Children and Adolescents Living with HIV (LoDoCA): a Prospective Cohort Study in Lesotho, Southern Africa	Teresa Steffy, Baylor College of Medicine, Lesotho
11:58 - 12:06	Challenges accessing sexual and reproductive health services among adolescent girls and young women living in remote villages in Lesotho	Momoronts'ane Pauline Sematle, SolidarMed & University of Basel
12:06 – 12:14	Clinical Outcomes of Patients with Advanced HIV Disease in Butha-Buthe District – A Retrospective Analysis of Routine Data for CrAg LFA Screening in Patients with a CD4 Less Than 200 Cells/ μ L in Three Facilities.	Biennu Nsakala, St Charles Mission Hospital Seboche
12:14 - 12:22	Cardiovascular Risk Profiles and Signs of Vascular Damage in People with HIV on ART in Rural Lesotho: Findings from the PRECARIF Study	Makhele Moshao, SolidarMed & University of Basel
12:22 - 12:30	Viral load result-triggered automated differentiated service delivery for people taking antiretroviral therapy in Lesotho: a cluster-randomized non-inferiority trial (VITAL)	Malebanye Leretholi, SolidarMed & University of Basel
12:30 - 12:38	Compliance of antibiotic prescriptions to standard treatment guidelines in four public hospitals in Lesotho.	Tebello Violet Sarele, University of KwaZulu Natal
12:38 – 12:46	Towards more responsive mental health support: An exploration of systems and services in Lesotho using a hybrid horizontal and vertical approach	Ann Scheunemann, Boston Medical Center, Lesotho-Boston Health Alliance
12:46-12:54	Demographic and Clinical Correlates of Breast Cancer Molecular Subtypes in Patients seen at the Senkatana Oncology Clinic, Maseru, Lesotho: A preliminary Study on Description of Incidence Rates.	Mopa Alina Sooro, National University of Lesotho
Reflections and Closing Session		
12:54 -13:00	Forum deliberation for the day and its reflections	Prof Niklaus Labhardt
13:00 - 13:10	Closing Remarks	Honourable Minister of Health
13:10 - 13:15	National Anthem	All
13:15 – 14:30	Lunch/Networking/Departure	All

Oral Presentation Session

Untreated, Uncontrolled, and Overtreated Hypertension in a Rural African Setting – A Population-Based Assessment in Lesotho

Iliana Esquivel^{1,2}, Giuliana Sanchez-Samaniego^{1,2}, Ravi Gupta³, Thesar Tahirsylaj^{1,2}, Thabo Ishmael Lejone^{1,2}, Fabian Raeber^{1,2}, Mamakhala Chitja^{*3}, Malebona Mathulise³, Thuso Kabi³, Mosoetsi Mokaeanane³, Malehloa Maphenchane³, Manthabiseng Molulela³, Makhebe Khomolishoele³, Mota Mota³, Sesale Masike³, Matumaole Bane³, Mamoronts'ane Pauline Sematle³, Retselisitsoe Makabateng³, Irene Ayakaka³, Madavida Mphunyane⁴, Lebohang Sao⁴, Mosa Tlahali⁴, Sejojo Phaaroo⁴, Malitaba Litaba⁴, Pauline Grimm⁵, Frédérique Chammartin^{1,2}, Alain Amstutz^{1,2,6,7}, Felix Gerber^{1,2}, Niklaus Daniel Labhardt^{1,2}

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Background: Research on hypertension in low- and middle-income countries (LMICs) has predominantly focused on underdiagnosis and undertreatment. While scaling up hypertension programmes may reduce these challenges, it could also result in overtreatment, an issue that remains insufficiently explored.

Methods: We conducted a cross-sectional prevalence assessment within the Community-Based Chronic Care Lesotho (ComBaCaL) cohort study that comprises all consenting inhabitants from 103 randomly selected rural villages. Adult participants were eligible for home-based blood pressure (BP) assessment. Hypertension was defined as BP $\geq 140/90$ mmHg, or use of antihypertensive medication. Uncontrolled hypertension was defined as on-treatment BP $\geq 140/90$ mmHg ; overtreatment as on-treatment systolic BP < 110 mmHg. Multivariate logistic regression models were conducted to identify factors associated with untreated, uncontrolled, and overtreated hypertension.

Results: Among screened participants, hypertension prevalence was 18.3% (1505/8236). Of those with hypertension, 24.9% (375/1505) were untreated. Among participants on antihypertensive treatment, 53.5% were controlled (605/1130), 26.3% uncontrolled (297/1130), and 20.2% overtreated (228/1130). Female sex (aOR 0.51, 95%CI 0.37- 0.71), older age (aOR 0.52, 95%CI 0.39-0.71), diabetes (aOR 0.23, 95%CI 0.11-0.42) and previous stroke or myocardial infarction (aOR 0.19, 95%CI 0.07-0.45) were associated with lower odds of being untreated, while smoking (aOR 1.90, 95%CI 1.42-2.55) and alcohol consumption (aOR 1.74, 95%CI 1.23-2.46) significantly increased the odds of being untreated. Taking three or more antihypertensive drugs (aRRR 2.28, 95%CI 1.49-3.48) was associated with a higher risk of uncontrolled hypertension. Previous stroke or myocardial infarction (aRRR 2.07, 95%CI 1.14-3.78) significantly increased the risk of overtreatment.

Conclusions: In rural Lesotho, less than half of individuals with hypertension achieved optimal BP control. Both insufficient control and overtreatment were prevalent. While further scale-up of hypertension programmes is needed to reduce undertreatment, overtreatment should not be disregarded. Accurate diagnosis, appropriate monitoring standards, and tailored treatment strategies are essential to ensure safe and effective hypertension management.

Community Health Worker-Led versus Facility-Based Hypertension and Diabetes Care in Rural Lesotho: Two Cluster-Randomized Trials within the Community-Based Chronic Care Lesotho Cohort

Felix Gerber^{1,2,3}, Ravi Gupta⁴, Thesar Tahirsylaj^{1,2}, Thabo Lejone^{1,2}, Giuliana Sanchez-Samaniego^{1,2}, Malebona Mathulise⁴, Thuso Kabi⁴, Mosoetsi Mokaeanane⁴, Malehloa Maphenchane⁴, Manthabiseng Molulela⁴, Manthathi Mofokeng⁴, Matumaole Bane⁴, Mota Mota⁴, Retselisitsoe Makabateng⁴, Lebohlang Sao⁵, Mosa Tlahali⁵, Malitaba Litaba⁵, Makhebe Khomolishoele⁴, Sesale Masike⁴, Mamoronts'ane Pauline Sematle^{*4}, Madavida Mphunyane⁵, Frédérique Chammartin^{1,2}, Alain Amstutz^{1,2,6,7}, Niklaus Daniel Labhardt^{1,2}

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Background: Access to hypertension and diabetes care remains insufficient, leading to poor treatment and control rates. Decentralization through the involvement of Community Health Workers (CHWs) may enhance access to care, particularly in remote areas. However, the effectiveness of CHW-led hypertension and diabetes care that includes independent drug prescription by CHWs is unknown.

Methods: We conducted two 1:1 cluster-randomized trials within the Community Based chronic Care Lesotho (ComBaCaL) cohort study using the Trials-within-Cohorts design. The ComBaCaL cohort includes inhabitants of 103 villages in rural Lesotho. Following community-based screening, cohort participants with diabetes or uncontrolled hypertension were enrolled. In intervention villages, CHWs provided care, including prescription of first-line medication (amlodipine/hydrochlorothiazide, metformin, atorvastatin), guided by a clinical decision support application. In control villages, participants were referred to the nearest health facility. Primary endpoints were the blood pressure (BP) control rate (<140/90 mmHg) and mean HbA1c after twelve months; secondary endpoints included engagement in care.

Results: Between May 12, 2023, and January 31, 2024, 547 participants with uncontrolled hypertension and 253 with diabetes were enrolled in separate trials. In both trials, more than half of participants were independently cared for by their CHWs leading to increased engagement in care without relevant adverse events. We observed a significantly higher BP control rate in the intervention arm (156/271 (58%)) compared to the control arm 130/272 (48%), aOR 1.52 (1.01-2.29), p=0.046). Final analysis for the diabetes trial is ongoing.

Conclusion: Community-based hypertension and diabetes care with independent drug prescription by CHWs guided by a clinical decision support application was safe, feasible, well accepted and improved blood pressure control rate among people with uncontrolled hypertension compared to professional facility-based care. These findings support broader implementation of CHW-led hypertension and diabetes care programs that include pharmacological treatment components, in areas where access to professional care remains limited.

Persistently High HIV Positivity and Death Rates Among Children Born to HIV Positive Mothers: Findings From a National PMTCT Program Evaluation in Lesotho

Suzue Saito¹, Tsigereda Gadisa², 'Mahlompho Ntholeng², Tlohang Moeketse², 'Maletsatsi Motebang³, Mamorapeli Ts'oeu³, Fred M Asiimwe³, Felix Ndagije²

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Background: Despite reaching the UNAIDS 90-90-90 targets and achieving high coverage of the Prevention of Mother to Child Transmission (PMTCT) program, there are persistent gaps in HIV testing and retesting during pregnancy, labor and delivery and post-partum as well as initiation and continuation of Pre-Exposure Prophylaxis among pregnant and post-partum women, as well as HIV testing and treatment initiation and continuation among HIV exposed infants (HEI).

Methods: We evaluated the HEI treatment cascade and 18-month outcomes for infants born between October 2020 and September 2021, using data abstracted from 132 /202 facilities participating in a national PMTCT Data Quality Assessment (DQA). Trained data collectors abstracted relevant data from HEI registers in an excel abstraction tool. PowerBI was used to define measures and summarize the HEI treatment cascade results. The assessment received non-research determination from CDC and Columbia University Medical Center institutional review boards.

Results: 10,659 HEI were registered for care during the observation period. By 12 months, 95.6% (10,187) were tested for HIV. Of the 10,659 HEI, 1.2% (123) were diagnosed with HIV by 12 months and an additional 111 were diagnosed after 12 month, yielding an overall 2.2% HIV positivity at 18 months of follow up. Of the 123 who were diagnosed by 12 months, 74.8% (92) initiated ART by 12 months. Of those 43.5% (40) were retained in care at the clinic they were born, 10.9% (10) had deceased, 6.5% (6) had interruptions in treatment, 7.6% (7) had transferred out, and 31.5% (29) lacked ART status documentation. At 18 months, among the original cohort of 10,659 HEI, an additional 173 had died, yielding an overall death rate of 1.7% (183).

Conclusion: These results underscore crucial gaps in diagnosis and continuity of care for HEI resulting in persistently high HIV positivity and mortality rates. In this high-burden environment, there is an urgent need for intensive follow up to lower pediatric HIV infections and enhance integrated management of childhood illness to improve survival.

Cohort Profile: The Viral Load Cohort North-East Lesotho (VICONEL) From 2016 to 2023 – Cohort Description, Test Volumes, Predictors of Viraemia and the Road Ahead

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Background: Prospective cohorts generate long-term data that help track service performance and health outcomes in HIV programs. The prospective Viral load Cohort North-East Lesotho (VICONEL) aims to support clinical management and generate scientific evidence to inform HIV care. Specifically, VICONEL allows for the monitoring of HIV treatment outcomes and health system performance, encompasses a biobank for further research with routinely collected blood plasma samples of consenting participants and provides a valuable framework for nested observational and interventional studies, including randomized trials.

Methods: VICONEL records routine viral load test results along with related demographic and treatment data for individuals receiving HIV care in one of the facilities in the North-East Lesotho. As of December 2023, it encompasses all viral load testing from 24 healthcare facilities in Butha-Buthe and Mokhotlong districts.

Results: Between January 2016 and December 2023, VICONEL recorded 137,660 viral load results from 29,380 participants. At the time of the last viral load test, median age was 42 years (IQR: 33-53); 18 511 (63%) were adult women, 10 029 (34%) adult men and 835 (3%) children <15 years (age/sex missing for 5) and median time taking antiretroviral therapy (ART) was 6.4 years (IQR 3.2-9.9). Overall, the proportion of cohort participants with viral suppression to <1000 copies/mL has continually exceeded 90%, surpassing 95% since 2020; however, this proportion remained lower among children. Sex, age category/ART regimen core agent (combined variable), time since ART initiation and district were independently associated with viraemia.

Conclusion: VICONEL provides a strong foundation for advancing HIV care in Lesotho through (1) further digitalization and automation of viral load result sharing at the client, facility and district/national level, (2) integration of broader clinical and diagnostic data including comorbidities and drug resistance profiles, and (3) the implementation of embedded randomized trials to strengthen evidence-based interventions.

Acquired Dolutegravir Resistance in Treatment-Experienced People With HIV in Lesotho

Nadine Tschumi^{1,2}, Blaise Lukau^{3*}, Katleho Tlali³, Lipontso Motaboli³, Mpho Kao³, Mathebe Kopo³, Kathrin Haenggi^{1,2}, Moleboheng Mokebe³, Klaudia Naegel⁴, Irene Ayakaka³, Karoline Leuzinger⁴, Jennifer A. Brown^{1,2a}, Niklaus D. Labhardt^{1,2a}

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Background: Dolutegravir-based antiretroviral therapy (ART) is widely used in Africa, but resistance data in routine care are scarce. We evaluated acquired dolutegravir resistance in Lesotho after changing from nonnucleoside reverse transcriptase inhibitor (NNRTI)-based ART.

Methods: In the Viral Load Cohort North-East Lesotho (VICONEL), we assessed emerging dolutegravir resistance among participants who changed from NNRTI- to dolutegravir-based ART before October 2021 and had at least 1 viral load assessment before and after the change. We did genotypic resistance testing (GRT) of available samples of participants fulfilling the additional virological criteria of having 2 viremic episodes while taking dolutegravir, with at least 1 viral load ≥ 500 copies/mL taken ≥ 18 months after changing to dolutegravir.

Results: Among 15,349 participants, 157 (1.0%) met the virological criteria, and GRT was successful for 85 (0.6%). Among these 85, 8 (9.4%) had dolutegravir resistance (2 intermediate, 6 high-level). Five had no active drugs in their regimen. A GRT from before the change to dolutegravir was available for 5 of these 8 participants: 4 had 0 and 1 had 1 active drug in their NNRTI-based regimen. The most frequent resistance-associated mutations in the integrase region were Q95K, G118R, E138K, and R263K. Seven participants switched to new regimens (e.g., tenofovir disoproxil fumarate/ lamivudine/ atazanavir/ ritonavir or tenofovir disoproxil fumarate/ lamivudine/ lopinavir/ ritonavir) between October 2023 and October 2024. A post-switch viral load was available for six participants and among these, four had viral load < 50 copies/mL, one had a viral load of 75 copies/mL and one a viral load of 572 copies/mL.

Conclusion: The prevalence of dolutegravir resistance among those with persistent or recurring viremia after changing to dolutegravir is concerning. Most participants with resistance achieved suppression post-switch, emphasizing the need for routine GRT in Lesotho.

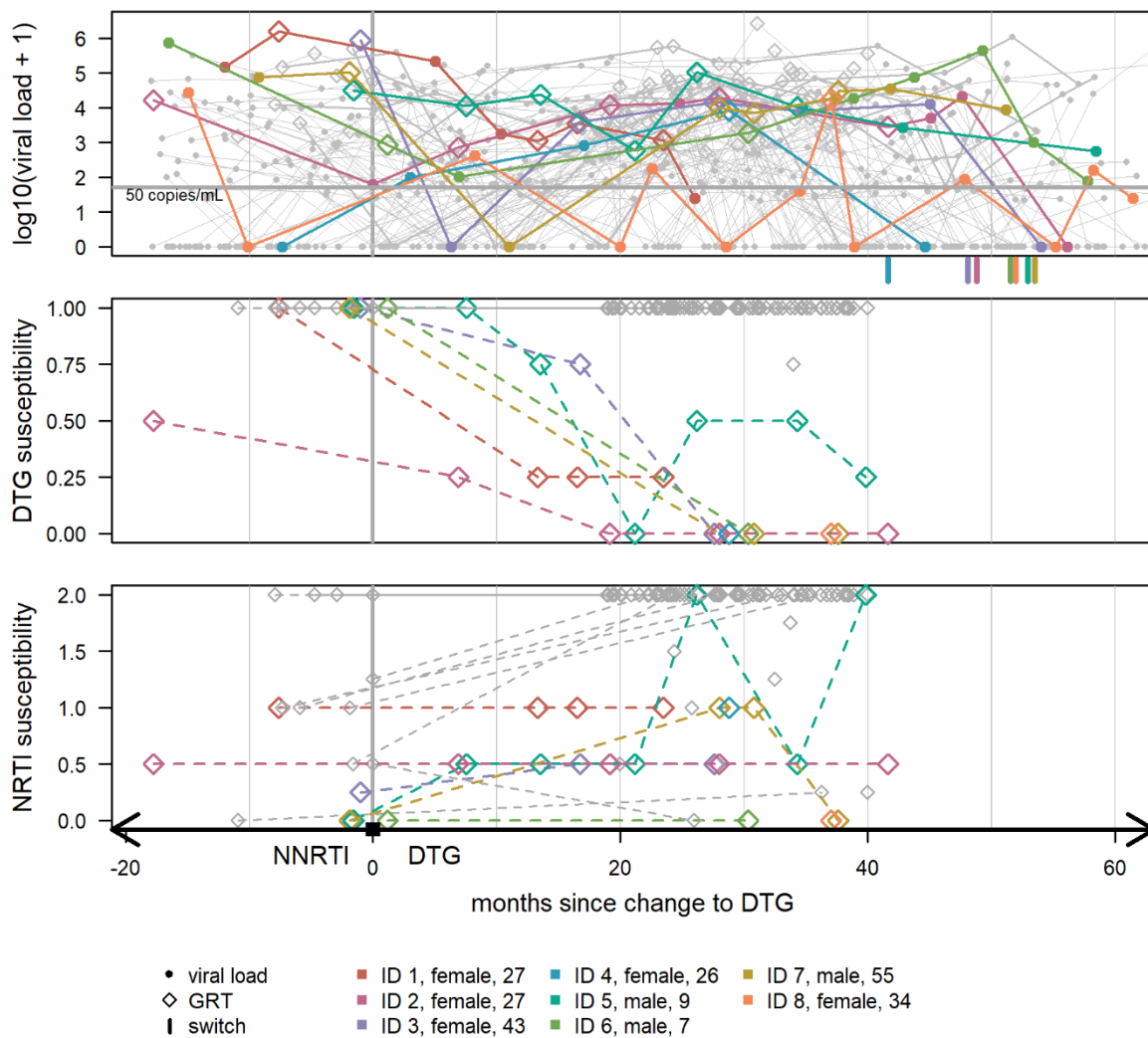


Figure. Viral load, dolutegravir, and NRTI backbone susceptibility from ≤ 18 months pretransition until the last available sample. Susceptibility scores refer to the regimen at sampling. Age refers to the age in years at change to dolutegravir. DTG, dolutegravir; GRT, genotypic resistance test; NRTI, nucleoside/nucleotide reverse transcriptase inhibitor.

Same-Day Antiretroviral Therapy Initiation in People With HIV and Presumptive Tuberculosis: A Randomized, Non-Inferiority Trial in Lesotho and Malawi (SaDAPT)

Felix Gerber^{1,2,3}, Robina Semphere⁴, Blaise Lukau^{5*}, Palesa Mahlatsi⁵, Giuliana Sanchez-Samaniego^{1,3}, Alain Amstutz^{1,3,6,7}, Mamello Molatelle⁸, Nthuseng Bridgett Marake⁹, Tapiwa Tarumbiswa⁹, Marriot Nliwasa^{4,11}, Irene Ayakaka⁵, Peter MacPherson¹⁰, Tracy R. Glass^{2,3}, Rachael Burke^{12¶}, Niklaus D. Labhardt^{1,3¶}

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Background: Same-day initiation of antiretroviral therapy (ART) is recommended for most people with HIV (PWH) to promote retention in care but may increase the risk of tuberculosis-immune reconstitution inflammatory syndrome (TB-IRIS). It is unknown whether same-day ART should be offered to PWH with TB symptoms or whether ART should be initiated only after TB diagnostic results are available.

Methods: We conducted an open-label, 1:1, individually-randomized, non-inferiority trial comparing “ART-first” versus “TB-results-first” among PWH in Lesotho and Malawi, aged ≥12 years, (re)initiating ART who had at least one TB symptom and no signs of meningitis. Participants in the “ART-first” arm were offered same-day ART; those in the “TB-results-first” arm were offered ART after TB was confirmed or refuted. The primary analysis was a non-inferiority comparison of viral suppression (<400 copies/ml) 26 (22-40) weeks after enrolment (non-inferiority margin 10%). Secondary outcomes included: retention in care; mortality; non-fatal serious adverse events (SAEs); ART initiation within 7 days; and TB-IRIS.

Results: From 19/10/2022-21/02/2024, 590 participants were randomized and included in intention-to-treat analysis (60% male; median age 37 years; median CD4 202 cells/mm³); 582 included in per-protocol analysis. Viral suppression rates at 26 weeks were 212/297 (71%) in the “ART-first” arm and 205/285 (72%) in the “TB-results-first” arm in the per-protocol population (absolute risk difference -1.2%; 95% CI: -8.6%-6.3%) with similar results in the intention-to-treat population, confirming non-inferiority of “ART-first”. Retention in care was 81% in both arms; ART initiation within 7 days was higher in “ART-first” (99% versus 85%). Nine and six deaths, eleven and ten non-fatal SAEs, and six and five TB-IRIS events occurred in “ART-first” and in “TB-results-first” arms respectively.

Conclusion: Outcomes of same-day initiation, and ART initiation after TB investigations were comparable. Same-day ART initiation can be recommended, though a brief delay appears acceptable.

Enhancing the Treatment of Pre-Extensively Drug-Resistant Tuberculosis: Results of the EndTB-Q Randomized Clinical Trial

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Background: Pre-extensively drug-resistant tuberculosis (pre-XDR-TB), resistant to rifampicin and fluoroquinolones, is difficult to treat. Recently, a 6–9-month regimen containing Bedaquiline, Pretomanid, and linezolid has shown encouraging results. This and other longer regimens have been recommended by WHO for pre-XDR-TB without randomized, internally controlled trials conducted in this specific population. endTB-Q evaluated the efficacy and safety of Bedaquiline, Clofazimine, Delamanid, and linezolid (BDLC) compared to WHO-recommended longer individualized regimen (control) in people with pre-XDR-TB.

Methods: endTB-Q was a randomized, internally controlled, open-label, Phase 3 trial conducted in India, Kazakhstan, Lesotho, Pakistan, Peru, and Vietnam. Participants were randomized 2:1 to BDLC for 6 months, prolonged to 9 months for extensive disease or in absence of sustained culture conversion by 24 weeks, or to the control. We report the risk difference for favorable outcome at 73 weeks post-randomization adjusted for stratification variables (country, disease extent). The non-inferiority margin was -12% in both modified intention-to-treat (mITT) and per protocol (PP) populations. We report toxicity in the safety population at 73 weeks. This study is registered on ClinicalTrials.gov, (NCT03896685)

Ethics: The endTB-Q trial has been approved by Partners In Health Ethics Review Board and by ethics committees of partner organizations (Harvard Medical School, Interactive Research and Development, Institute of Tropical Medicine, Médecins Sans Frontières) and each participating country.

Results: Between March 2020 and March 2023, 324 participants were randomized: 219 (67.6%) to BDLC and 105 (32.4%) to control. In mITT, extensive disease was present in 105 (64.4%) and 52 (61.9%) of the BDLC and control groups, respectively. At 73 weeks, favorable outcomes were observed in 141 (86.5%) BDLC and 75 (89.3%) control participants (adjusted risk difference [aRD] mITT: 0.2% [95%CI: -9.1%;9.5%]; aRD PP: -3.5% [95% CI: -12.8%,5.9%]). In a prespecified subgroup analysis, aRD mITT was -7.5% [95% CI: -18.3%,3.2%] for extensive and 5.6% [95% CI: -7.6%,18.8%] for limited disease. At least one serious adverse event occurred in 45 (21.1%) BDLC and 25 (23.8%) control participants. There were 11 deaths: 9 (4.1%) in BDLC and 2 (1.9%) in control.

Conclusions: endTB-Q demonstrated excellent outcomes with a shortened BDLC regimen for pre-XDR-TB with limited disease. Individuals with extensive disease may require longer, reinforced regimens.

Rapid Fire Presentation Session

Tolerability of Lopinavir Versus Dolutegravir for Children and Adolescents Living With HIV (LoDoCA): A Prospective Cohort Study in Lesotho, Southern Africa

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Background: Ensuring the tolerability of antiretroviral therapy (ART) is crucial for adherence and HIV viral suppression. Recently, dolutegravir (DTG)-based ART has become the preferred regimen. In Lesotho, children and adolescents previously taking ritonavir-boosted lopinavir (LPV/r) transitioned to DTG-based ART between 2022 and 2023. This study examines changes in treatment satisfaction and known side effects associated with LPV/r (primarily gastrointestinal) and DTG (notably neuropsychiatric effects, including sleep disturbances).

Methods: This prospective cohort study included children and adolescents <18 years who transitioned from LPV/r- to DTG-based ART at the Baylor Foundation Lesotho Maseru clinic during the DTG rollout. Participants meeting additional criteria (such as ≥6 years old) qualified for sleep monitoring through actigraphy. Enrollment occurred either two weeks before (with actigraphy) or at regimen change (without actigraphy), with follow-up four weeks after transition. Primary outcomes were: 1) self- or caregiver-reported changes in treatment satisfaction at four weeks, assessed using the HIV Treatment Satisfaction Questionnaire change version (HIVTSQc), compared to no change (=0) using Wilcoxon signed-rank test; and 2) comparison of average sleep duration before and after transition among those with actigraphy data, analyzed using paired t-test. Secondary outcomes included comparison of additional questionnaires and sleep measures at baseline and follow-up (ClinicalTrials.gov: NCT05426421).

Results: Of 245 participants with complete data, 47% were female, and median age was 11.1 years (IQR 8.9-13.6). Both caregiver-reported (n=149, median 30.0, p<0.001) and self-reported (n=92, median 16.0, p<0.001) HIVTSQc-outcomes indicated improved treatment satisfaction (Table 1). Among 69 participants monitored with actigraphy, sleep duration remained similar before and after switch (9.0 vs. 9.2 hours, p=0.045; Table 2). Other measures of tolerability, including depression and sleep quality, showed no significant changes (Tables 1-2).

Conclusions: Transitioning to DTG-based ART was associated with improved treatment satisfaction without notable changes in sleep patterns or other tolerability factors, supporting continued rollout for pediatric DTG.

Table 1: **Primary and secondary self-reported tolerability outcomes.** CES-DC: Center for Epidemiological Studies Depression Scale for Children; CI: confidence interval; GSRS-PI: Gastrointestinal Symptom Rating Scale modified to the characteristics of protease inhibitors; HIVTSQ-c: HIV Treatment Satisfaction Questionnaire, change version; HIVTSQ-s: HIV Treatment Satisfaction Questionnaire, status version; IQR: interquartile range. (Range: -30.0 to 30.0 caregiver and -16.0 to 16.0 for self-report; higher scores indicate greater satisfaction)

Outcome	Measure and range	At transition, median (IQR)	At 4 weeks, median (IQR)	Difference, mean (95% CI)	p-value
Co-primary					
Change in treatment satisfaction, caregiver-reported (participants <12 years) (n=149)	HIVTSQ-c; -30 to 30 (higher scores indicate higher satisfaction)	NA	30 [30-30]	Difference from 0 (no change)	< 0.001
Change in treatment satisfaction, self-reported (participants ≥12 years) (n=92)	HIVTSQ-c; -16 to 16 (higher scores indicate higher satisfaction)	NA	16 [16-16]	Difference from 0 (no change)	< 0.001
Secondary					
Treatment satisfaction, caregiver-reported (participants <12 years) (n = 144)	HIVTSQ-s; 0 to 60 (higher scores indicate higher satisfaction)	60 [58-60]	60 [59-60]	0.1 (-0.5-0.7)	-
Treatment satisfaction, self-reported (participants ≥12 years) (n=89)	HIVTSQ-s; 0 to 32 (higher scores indicate higher satisfaction)	31 [29-32]	32 [31-32]	0.8 (0.2-1.3)	-
Depressive symptoms, self-reported (participants ≥6 years) (n=221)	CES-DC; 0 to 60 (higher scores indicate more depressive symptoms)	6 [3-11]	6 [3-9]	-1.4 (-2.2--0.5)	-
Gastrointestinal symptoms, caregiver-reported (participants <12 years) (n=150)	GSRS-PI; 13 to 78 (higher scores indicate more gastrointestinal symptoms)	13 [13-15]	13 [13-13]	-0.6 (-1.3-0.1)	-
Gastrointestinal symptoms, self-reported (participants ≥12 years) (n=92)	GSRS-PI; 13 to 78 (higher scores indicate more gastrointestinal symptoms)	13 [13-16]	13 [13-16]	0.4 (-1.0-1.8)	-

Table 2: Primary and secondary actigraphy-based sleep outcomes. CI: confidence interval; SD: standard deviation.

Outcome (n=69)	Pre-transition, mean (SD)	2-4 weeks post-transition, mean (SD)	Difference, mean (95% CI)	p-value
Co-primary				
Estimated length of sleep period, in hours	9.0 (1.0)	9.2 (1.0)	0.2 (0.0 – 0.4)	0.045
Secondary				
Estimated duration of sleep in sleep period, in hours	7.4 (1.1)	7.40 (1.0)	0.0 (-0.2 – 0.2)	-
Estimated number of awakenings during sleep window	21.0 (4.5)	22.2 (4.2)	1.2 (0.2 – 2.2)	-
Midpoint of sleep, time in hours	1.9 (0.6)	1.9 (0.6)	0.0 (-0.1 – 0.1)	-
Sleep efficiency (in %)	77.0 (8.9)	76.4 (9.0)	- 0.6 (-2.3 – 1.1)	-
Sleep latency	0.7 (0.6)	0.6 (0.6)	-0.1 (-0.3 – 0.1)	-

Clinical Outcomes of Patients With Advanced HIV Disease in Butha-Buthe District – A Retrospective Analysis of Routine Data for CrAg LFA Screening in Patients With a CD4 Less Than 200 Cells/ μ L in Three Facilities

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Keywords: CrAg Screening, Cryptococcal Meningitis, Advanced HIV Disease, CD4 Count, Antifungal Therapy

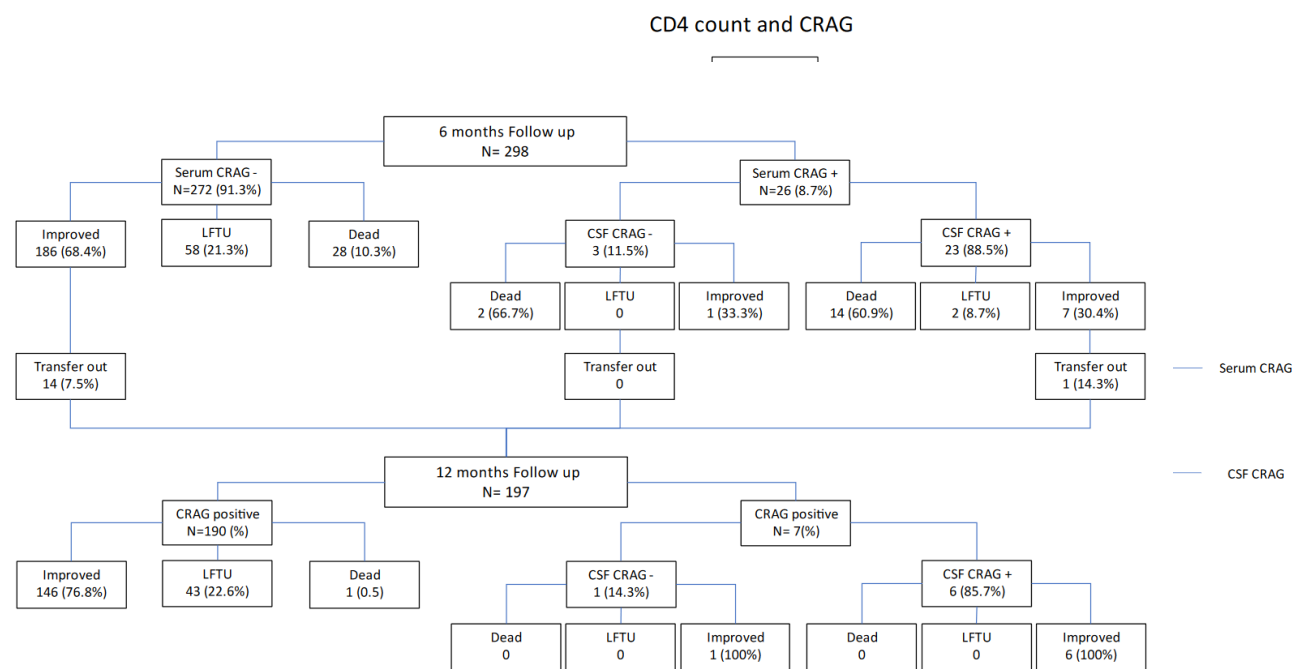
Background: Cryptococcus is the leading cause of meningitis in adults living with HIV in sub-Saharan Africa. Cryptococcal infections remain underreported and attempts to estimate their incidence and prevalence are limited. Studies suggest a global cryptococcal antigenaemia prevalence of 6.0% among people with a CD4 count below 200 cells/ μ L, with sub-Saharan Africa accounting for 73% of cases. In 2014, annual global deaths due to cryptococcal meningitis were estimated at 181,100, with 75% occurring in sub-Saharan Africa. The UNAIDS 90-90-90 targets emphasise early ART initiation, which reduces morbidity and mortality, yet many patients still present with advanced HIV disease (AHD).

Methods: This retrospective study analysed routine data from three health facilities in Butha-Buthe District: Butha-Buthe Government Hospital (BBGH), Seboche Hospital, and Tsime Health Centre. We quantified the proportion of individuals with CD4 < 200 cells/ μ L among all baseline CD4 tests conducted and determined the prevalence of CrAg positivity in this population. We evaluated mortality and the effects of prompt antifungal treatment on CrAg-positive patients after 6 and 12 months.

Results: A total of 298 participants were screened, of whom 266 met the eligibility criteria and were included in the study. The median age was 39 years (IQR 34–46), and 172 (57.14%) were male. Among the participants, 252 (95.7%) had a CD4 count below 100 cells/ μ L and were ART-naïve. Of these, 26 (9.8%) tested CrAg positive, and 23 (8.6%) developed cryptococcal meningitis. Following Amphotericin B treatment, at 6 months, 7 (30.4%) were alive and healthy, 14 (60.8%) had died, and 2 (8.7%) were lost to follow-up (LTFU). By 12 months, no additional deaths were recorded.

Conclusion: Despite antifungal treatment, mortality remains high among patients with cryptococcal meningitis, with 60.8% succumbing to the disease within six months. Routine CrAg screening in patients with low CD4 counts is crucial to reducing morbidity and mortality. Implementing systematic screening and preemptive antifungal treatment in asymptomatic patients with positive CrAg could significantly mitigate disease burden.

Figures



Compliance of Antibiotic Prescriptions to Standard Treatment Guidelines in Four Public Hospitals in Lesotho

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Keywords: Antibiotic Stewardship, public hospitals, Antibiotic Prescribing Patterns, Antibiotic Resistance, AWaRe Classification, Lesotho, Standard Treatment Guidelines.

Background: The World Health Organisation has declared antibiotic resistance as a global health crisis. Appropriate antibiotic prescribing is important in preventing the rise in antibiotic resistance and improving patient outcomes. The objective of the study was to assess the compliance of antibiotic prescriptions to standard treatment guidelines in four public hospitals in Lesotho.

Methods: Ethical approval was obtained from The Ministry of Health Lesotho Research Ethics Committee (Ref:ID229-2022) and the Biomedical Research Ethics Committee of the University of KwaZulu-Natal (Ref: BREC/00004990/2022). A cross-sectional study was conducted to collect data from medical records of randomly selected consenting patients with an antibiotic prescription. Statistical Software for Social Sciences version 29 (SPSS V. 29) was used for data entry and analysis. Descriptive statistics such as frequencies were used to analyse categorical variables, and associations between dependent and independent variables was determined through Chi-square test and Binary logistics model.

Results: Among 481 patients, 71% were female. Of all the patients, 98.5% of antibiotics prescribed were empirical antibiotics. The most prescribed antibiotic was metronidazole (33.1%), followed by amoxicillin (28.3%), both belonging to the Access group antibiotic and ceftriaxone (21.0%) a Watch group antibiotic. The results further show that of those prescriptions, 43.7%, 44.1% and 44.7% of prescriptions were compliant with dose, frequency and duration recommended by the Standard Treatment Guidelines. Based on the all-or-nothing principle, the overall compliance to Standard Treatment Guidelines was n = 180; 37.4%.

Conclusions: This study revealed a low compliance with guidelines despite the availability of updated guidelines for antibiotic prescriptions. The findings confer an urgent need to confront antibiotic prescription patterns in the study sites through tailored interventions to improve compliance to antibiotic guidelines. Antibiotics stewardship interventions may be needed to monitor ceftriaxone prescribing which is the most prescribed Watch antibiotic.

Cardiovascular Risk Profiles and Signs of Vascular Damage in People With HIV on ART in Rural Lesotho: Findings From the PRECARIF Study

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Keywords: atherosclerosis, ankle brachial index, arterial hypertension, blood pressure, chronic diseases, diabetes mellitus, retinopathy, non-communicable, peripheral arterial disease, Lesotho.

Background: The introduction of antiretroviral therapy (ART) has significantly improved the life expectancy of people living with HIV (PLHIV) across Africa. As individuals on ART age, the burden of cardiovascular diseases (CVDs) has gained increasing importance. The PRECARIF study aimed to assess the prevalence of cardiovascular risk factors and early signs of vascular damage among PLHIV receiving ART in rural Lesotho.

Methods: This cross-sectional study enrolled adults aged 18 years or older who attended routine ART visits at five healthcare facilities (clinics and hospital) in rural Lesotho. After a structured interview, participants were assessed for cardiovascular risk factors, including blood pressure (BP), fasting blood glucose, fasting lipid profiles, body mass index (BMI), and smoking status. Vascular damage was evaluated using the ankle-brachial index (ABI), fundoscopy for retinopathy, and ultrasound of carotid and femoral intima-media thickness (IMT). Pathologic ABI was defined as values below 0.9, retinopathy as abnormal blood vessels in the retina on fundoscopy examination, and IMT was considered abnormal if it was greater than 0.9mm.

Results: Among 343 participants (66.2% female), the median age was 50 years (range, 25-83years). Elevated BP was observed in 64%, elevated blood glucose in 9.3%, dyslipidemia in 7%, and a BMI $\geq 25\text{kg/m}^2$ in 62.7%; 25.6% reported smoking. The proportion of participants with zero, one, or two or more cardiovascular risk factors was 11.4%, 30%, and 58.6%, respectively. Ultrasound revealed abnormal IMT in 12% of participants for carotid and 7.9% for femoral arteries. Retinopathy was present in 12.8%, while 18.4% had a pathologic ABI and 35% renal impairment. Overall, 26.1% exhibited at least one marker of vascular damage.

Conclusion: A high proportion of PLHIV on ART in rural Lesotho had one or more cardiovascular risk factors, and 26.1% displayed evidence of vascular damage, including retinopathy or peripheral arterial disease. These findings underscore the need for integrated approaches to CVD prevention and management within HIV care programs in resource-limited settings, emphasizing the importance of addressing these emerging health challenges to improve long-term outcomes for PLHIV.

Viral Load Result-Triggered Automated Differentiated Service Delivery for People Taking Antiretroviral Therapy in Lesotho: A Cluster-Randomized Non-Inferiority Trial (VITAL)

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Background: Differentiated service delivery (DSD) models offer an opportunity to enhance person-centered HIV care and optimize resource allocation amidst rising numbers of people receiving antiretroviral therapy (ART).

Methods: The *Viral load triggered ART care in Lesotho (VITAL)* pragmatic cluster-randomized non-inferiority clinical trial enrolled adults receiving ART at 18 rural nurse-led health centers in Lesotho (NCT04527874). Stratified by district, health centers were randomized 1:1 to provide either automated viral load (VL) result-triggered DSD including multi-month dispensing of ART, preference-based mHealth support (automated VL notification-, clinic visit reminder-, and ART adherence SMS, telephone support), and a clinical decision support application for nurses (VITAL arm) or enhanced standard of care (SOC arm). The primary endpoint was engagement in care with documented viral suppression (<50 copies/mL) at 24 months (window: 16-28 months) collected through routine care. The adjusted odds ratio (aOR) was estimated in the modified intention-to-treat (mITT) population with a non-inferiority margin of 0.8.

Results: Between October 2020 and March 2022, 5'809 participants were enrolled, of whom 5'769 were included in the mITT analysis (3'427 VITAL arm; 2'342 SOC arm), 3'802 (65.9%) were female, median age was 41.3 years (interquartile range 33.7-51.4). The primary endpoint was reached by 2'667 (77.8%) in the VITAL arm and by 1'740 (74.3%) in the SOC arm (aOR [95% profile confidence interval]: 1.18 [0.94-1.47]). Among 2'807 (81.9%) and 1'818 (77.6%) with VL measurement at 24 months, 140 (5.0%) and 78 (4.3%) had a VL ≥50 copies/mL. Out of 387,368 text messages sent to 2'560 participants, 297,348 (76.8 %) SMS were successfully delivered.

Conclusions: VL result-triggered automated DSD for adults receiving ART demonstrated non-inferiority but not superiority to SOC. Automated VL notification-, clinic visit reminder-, and ART adherence SMS were feasible in this setting.

Demographic and Clinical Correlates of Breast Cancer Molecular Subtypes in Patients Seen at the Senkatana Oncology Clinic, Maseru, Lesotho: A Preliminary Study on Description of Incidence Rates

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Background: Breast cancer is the second most common cancer diagnosed in Lesotho, and accounts for a substantial amount of cancer deaths in the country. The aim of this study was to describe the molecular subtypes of breast cancer (BC) that patients seen at the Senkatana oncology clinic presents with.

Methods: A cross-sectional study was conducted in December 2023 and January 2024. Data was extracted from patients medical files kept at the clinic. Descriptive statistical analysis was conducted to determine frequencies and percentages. Correlation analyses were conducted to compare BC molecular subtypes with various demographic and clinical characteristics.

Results: A total of 66 BC patients were studied. The findings revealed a median patient age of 51 years, with the highest incidence observed in the 36–45 age groups. Majority of the patients (68%) presented with Stage IIIB and higher stages, indicating late-stage diagnoses. Additionally, Stage IIIB was heavily skewed towards younger individuals, with 53% in the 36-45 age groups. Moreover, the aggressive nature of breast cancer in this population was evidenced by high Ki-67 expression levels in the majority of cases, particularly among HER2-enriched and Triple-negative subtypes. Correlation analysis demonstrated that early-stage cancers with high Ki-67 expression were primarily HER2-enriched.

Conclusion: These findings underscore the urgent need for increased awareness, improved screening programs, and early intervention strategies to enhance breast cancer outcomes in Lesotho. Further research is necessary to explore the underlying factors contributing to early-onset and aggressive breast cancer in this population, which may inform targeted preventive and therapeutic measures.

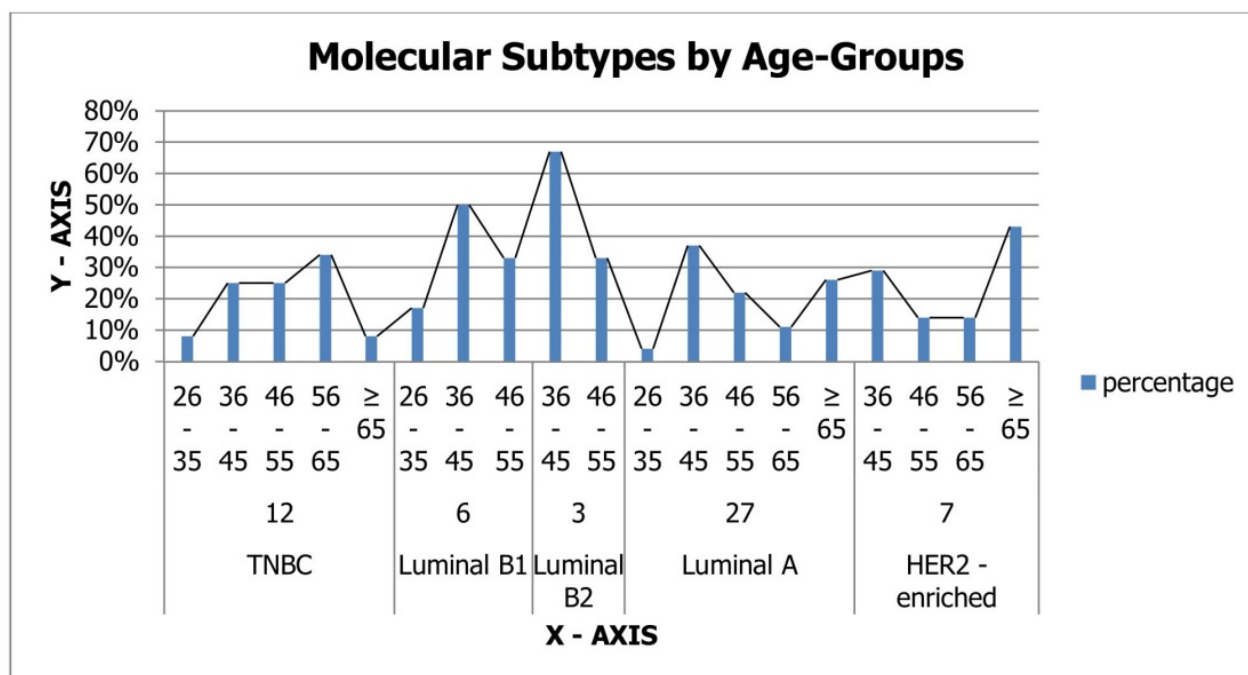


Figure 1: Comparative Analysis of Age-Groups across Breast Cancer Molecular Subtypes among patients seen at the Senkatana oncology clinic, Maseru: TNBC; triple negative breast cancer; Luminal B1 corresponded to BC that was hormone receptor (HR) positive and human epidermal growth receptor-2 (HER-2) negative while Luminal B2 corresponded to one that was both HR and HER-2 positive

STAGES	NUMBER	Percentage (%)	AGE-GROUPS (n, %)
I	1	2%	36 – 45 (1, 100%)
IIA	4	7%	36 - 45 (2, 50%)
			≥ 65 (2, 50%)
IIB	3	5%	46 – 55 (1, 33%)
			≥ 65 (2, 67%)
IIIA	10	18%	36 – 45 (4, 40%)
			46 – 55 (2, 20%)
			56 – 65 (2, 20%)
			≥ 65 (2, 20%)
IIIB	17	31%	26 – 35 (3, 18%)
			36 – 45 (9, 53%)
			46 – 55 (3, 18%)
			56 – 65 (0)
			≥ 65 (2, 11%)
IIIC	7	13%	36 – 45 (1, 14%)
			46 – 55 (1, 14%)
			56 – 65 (3, 43%)
			≥ 65 (2, 29%)
IV	13	24%	36 – 45 (3, 23%)
			46 – 55 (6, 46%)
			56 – 65 (3, 23%)
			≥ 65 (1, 8%)

Table 1: Comparison of the TNM Stages of patients in various Age Groups at the Senkatana clinic

Towards More Responsive Mental Health Support: An Exploration of Systems and Services in Lesotho Using a Hybrid Horizontal and Vertical Approach

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Background: Lesotho's context includes many sociocultural, economic, political, and historic factors that impact mental health, and limited data suggest high rates of mental distress. Lesotho's mental health infrastructure struggles to support people needing mental health care, resulting in a large treatment gap. This study explored the consequences of a lack of mental health support, as well as avenues to increase responsiveness within Lesotho's mental health system.

Methods: Data were collected throughout Lesotho, from 25 focus groups and four interviews with a diverse spectrum of health workers, mental health workers, and community members. Participants described systems and services providing mental health care, and provided recommendations for improving care. Data were transcribed and analyzed to elicit major themes.

Results: Major themes were *meaning-making, communication and collaboration, unmet needs across levels of care, and expanding provision of mental health care through strengthening and decentralization, engagement with communities and across sectors, and empowerment through knowledge*. These themes are explored within the Lesotho context and best practices in interventions and task-shifting, to propose a model for strengthening the mental health infrastructure that 1) supports enhancing expertise in mental health vertically across community, district, and national levels, and reflects increasing levels of knowledge and experience; 2) expands care horizontally, to include systems and sectors beyond the health system; 3) recognizes mental health as influential throughout the lifespan, and supports mental health promotion, prevention, early intervention, and treatment from early childhood throughout life; 4) recognizes mental wellbeing as one part of holistic wellbeing and integrated care; and 5) recognizes mental health to be intergenerational and affected by factors external to the individual, therefore requiring solutions including family, community, and national systems as well individual systems.

Conclusions: The model suggests ways for locally identified assets and limitations and evidence-based initiatives to be integrated with government care pathways.

Challenges accessing sexual and reproductive health services among adolescent girls and young women living in remote villages in Lesotho

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Introduction: Adolescent girls and young women (AGYW, 16-24 years) are at particularly high risk of acquiring HIV and are disproportionately affected by new infections. Early, unintended pregnancies and high adolescent birth rates are concurrent challenges. Research in the region has shown that low uptake and poor adherence to sexual and reproductive health services among AGYW is linked to insufficient or misleading information, stigma, and service access barriers, such as travel costs, inconvenient service hours and poor quality of care provided by health care workers in often hard-to-reach and understaffed healthcare facilities.

Methods: We used qualitative research methods with data obtained from focus group discussions FGDs to understand the sexual and reproductive health prevention needs and challenges among AGYW living in remote villages in north-eastern Lesotho. Trained Sesotho-speaking research assistants conducted the FGDs and audio recordings were transcribed verbatim and translated into English and analysed using thematic analysis.

Findings: Participants express a limited understanding of SRH, indicating a need for better education on the subject. Misconceptions about the effectiveness of condom use led to increased risks of HIV, unintended pregnancies and STIs. The preference for receiving services from trusted individuals highlights the importance of confidentiality in healthcare settings and rural location, lack of knowledge, and transport costs were cited as barriers to accessing SRH services.

Discussion: Our findings highlight critical gaps in sexual SRH awareness and access among AGYW in remote areas of Lesotho. Limited understanding of SRH, compounded by misconceptions about condom efficacy, underscores the urgent need for targeted, community-based education initiatives. The reliance on trusted individuals for healthcare services reinforces the importance of confidentiality and culturally sensitive approaches in service delivery.

Further selected abstracts that were not presented

Assessment of Prevalence of Self-Medication With Antibiotics Among Students at the National University of Lesotho

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Background: Self-medication can benefit the individuals and is recognized by WHO (2018) as part of self-care. The youth is especially exposed to media and the increased advertising of pharmaceuticals poses a larger threat to the population. The practice of self-medication should be based on authentic medical information otherwise irrational use of drugs can cause wastage of resources, increased resistance to pathogens, and prolonged morbidity. Self-medication is a useful tool for treatment of minor ailments, however improper self-medication practice may lead adverse drug reactions, inappropriate choice of medication, risk for double medication and harmful interactions, risks of dependence and abuse, and over/under dosing of medicines, and antimicrobial resistance due to irrational use of antibiotics (Mamo, Ayele, Dechasa, 2018).

Purpose: The purpose of the study was to investigate self-medication with antibiotics among students.

Methods: A cross-sectional quantitative study design was used. Data was collected using a self-administered questionnaire following ethical clearance.

Results: Most students (52%) were aware of what self-medication. 68% attested to have engaged in it previously without the knowledge of the side effects that were brought by it. Reasons for self-medication with antibiotics ranged from poor health services to increased costs of treatment.

Conclusion: Self-medication with antibiotics is a real problem among students, this is a serious problem which needs a better focus and intervention, keeping in mind the alarming rate of antibiotic resistant pathogens. The findings of this study showed that minor illnesses are the major reason for self-medication.

Reported Causes of Mortality Among Women Living With HIV in Four Districts of Lesotho: A Cross-Sectional Community Survey

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Background: Despite achievement of epidemic control, HIV prevalence remains high among women of reproductive age. While newer, highly efficacious antiretroviral therapy (ART) regimens can significantly improve viral suppression, there is a need to better understand frequency and causes of mortality of women with HIV and strengthen health facility record data. We described mortality among a community-based population of women with HIV in Lesotho.

Methods: From February to November 2024, data collectors screened and enrolled households with children born 18 months to 14 years earlier (including children who had died). The child's biological mother (if available) or caregiver was asked questions about the child and the biological mother's health care utilization (including HIV testing and treatment) and offered HIV testing. If the child's mother had died, data collectors asked caregivers for date and probable cause of death.

Results: We enrolled 7,821 children from 4,730 biological mothers in the study. There were 199 (4.2%) deaths among mothers. Caregivers reported that 63 of these deceased mothers were HIV-positive (31.7%). Caregivers reported that 50 (79.4%) women with HIV had ever been on ART, 5 (7.9%) never took ART, and 8 (12.7%) had unknown ART status. Caregivers provided probable causes of death information for 44 (69.8%) women with HIV. HIV was reported as cause of death, without information on other conditions/causes, for 22 women (50% of those with any death information), and seven of those women reportedly defaulted from ART. Other reported causes of death among women with HIV included tuberculosis (N=8), pregnancy/delivery complications (N=4), accidents/violence (N=3), respiratory illness (N=2), heart disease/attack (N=2), unspecified illness (N=2), and stroke (N=1).

Conclusions: While data are limited to caregiver reports with few details, they underscore the fact that HIV-related mortality and other preventable deaths remain a significant challenge even in the context of widespread access to effective treatment for HIV and other related conditions.

Exploring Healthcare Workers' Perceptions Towards the Emergency Unit's Capacity to Provide Trauma Care in a Selected Hospital in Lesotho

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Keywords: Healthcare workers, Trauma care, Perceptions, Emergency unit

Background: Trauma-related mortality is of high prevalence in low-middle income countries and accounts amongst top causes of mortality that could have otherwise been averted. There is a need to assess the context of emergency care services in Lesotho. This abstract reports on the study whose aim was to explore healthcare workers' perceptions of the hospital emergency unit's capacity to provide trauma care.

Methods: The study utilized qualitative descriptive exploratory research design to have insight into the perceptions of healthcare workers regarding the provision of trauma care services in the emergency unit at Mafeteng Hospital. Purposive sampling technique was used to select the participants and a total of ten healthcare workers. Data was collected through face-to-face in-depth interviews with the use of unstructured open-ended questions of the interview guide and thematic analysis was used to analyse the data collected.

Results: Three themes and nine subthemes were synthesized to elucidate healthcare workers' perceptions on the emergency department's capacity to render trauma care in the selected hospital. According to the participants, limitations such as shortage of skilled personnel, poor infrastructural characteristics and technological support, in addition to lack of clinical care guidelines posed as major hindrances to provision of adequate trauma care thus rendering trauma care services in the department suboptimal.

Conclusion: The shortcomings in the provision of trauma care in the emergency unit are a result of antiquated or poor infrastructure, inadequate staffing and limited essential medical supply and equipment and lack of specialized in-service training. Utilization of the results of the study will improve emergency unit's capacity thus allowing trauma care policy developers and leaders to have areas of reference marked as key in strengthening trauma care services provision.

Exploring Adolescent Contraceptive Use: The Voices of Parents/Guardians From a Selected Hospital in Lesotho

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Background: Sexual and reproductive health (SRH) services have drawn much attention in most African countries. Special focus had been directed toward the utilization of sexual and reproductive health services by adolescents aged 15 to 19 years old. However, little is known about parental and guardians' roles in optimizing the utilization of sexual and reproductive health services by adolescents 15 – 19 years in Leribe district, Lesotho. The study aimed to explore the perceptions and experiences of parents and guardians regarding contraceptive use by adolescents to prevent teenage pregnancy in the Leribe district.

Methods: A qualitative exploratory study design was done using one-on-one semi-structured interviews with parents and guardians raising adolescents aged 15-19 years in their homes. Twelve parents and guardians attending healthcare services at the selected hospital were purposively selected to participate in the study. Data was analysed using six steps of Thematic data analysis by Braun and Clarke.

Results: Six themes were identified from the study, parents and guardians knew about contraceptives and their use, contraceptive use was understood to prevent problems to the family, contraceptives were viewed as resulting in unfavourable behaviour to adolescents, experiences on sexual health communication were considered as significant and non-significant, outreach services were needed to reach vulnerable adolescents, and awareness about contraceptive use by adolescents.

Conclusion: Participants were aware of the prevailing situation of teenage pregnancy and its consequences. That is why they advocated for contraceptive use by adolescents and engage in sexual health communication for their adolescents to make the right decisions concerning SRH issues.

Factors Associated With Unfavourable Birth Outcomes Among Women Who Delivered in Quthing, Lesotho, 2021: Cross-Sectional Study

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Keywords: neonatal deaths, stillbirths, preterm birth, low birth weight, macrosomia, associated factors

Background: Unfavourable birth outcomes are a major global public health concern, especially in low-to-middle-income countries, and Lesotho is no exception. Quthing district contributed a high rate of unfavourable outcomes to the national rates. This study aimed to describe the characteristics of unfavourable birth outcomes and identify the factors associated with unfavourable birth outcomes among women who delivered in Quthing district health facilities in 2021.

Methods: We conducted a cross-sectional study through a review of the records of women who delivered in Quthing district health facilities in 2021. We captured data using Epi-Data and used Stata/SE-18 for cleaning and analysis. We used descriptive statistics to describe the characteristics of the study participants. We used Univariable and multivariable logistic regression to identify the factors associated with unfavourable birth outcomes.

Results: Of the 771 reviews, 151(19.5%) experienced unfavourable birth outcomes. The study participants' median age and interquartile range was 23 (20, 29) years. The factors associated with the unfavourable birth outcomes were not attending antenatal clinic [AOR 4.7, 95%CI (1.66, 13.51) p-value 0.004], advanced maternal age [AOR 2.9, 95%CI (1.67, 5.15) p-value <0.001], delivering at the hospital [AOR 1.9, 95%CI(1.04, 3.32) p-value 0.035] and pre-eclampsia [AOR 2.3, 95%CI(1.04, 5.13) p-value 0.039]. Caesarean section delivery [AOR 1.8, 95%CI (1.13, 3.03) p-value 0.035], and fewer (1-2) antenatal visits were also associated with unfavourable birth outcomes.

Conclusion: Improved monitoring of women during pregnancy through delivery can reduce the rate of unfavourable birth outcomes. Women should be encouraged to attend antenatal care for early detection and management of complications.

Usability of an Open-Source Clinical Decision Support Application for Community Health Worker-Led Hypertension and Diabetes Care in Rural Lesotho: A Mixed-Methods Implementation Study

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Background: Equipping Community Health Workers (CHWs) with clinical decision support (CDS) applications may allow to expand their responsibilities beyond health promotion to include screening, diagnosis, and treatment delivery for hypertension, diabetes, and other diseases. However, evidence regarding the design and implementation of such CDS applications is scarce.

Methods: We developed a CDS application based on the open-source Community Health Toolkit. The application was used by 103 CHWs for hypertension and diabetes care delivery for more than two years in rural villages in Butha-Buthe and Mokhotlong operating within the Community-Based chronic Care Lesotho project. A usability assessment was conducted through a cross-sectional survey among all CHWs (n=103) alongside individual interviews (n=4) and focus group discussions (n=2). We assessed usability using the System Usability Score (SUS), ease of use using likert-scale questions and main benefits and challenges using multiple choice questions with further qualitative exploration.

Results: Over two years, the application was functional without interruptions in all 103 villages. 103 (63% female) CHWs have completed the survey. The median SUS score was 76, indicating good usability. 98% and 94% of CHWs perceived diagnosing and giving treatment advice for hypertension or diabetes with the application as (very) easy. 95% and 94% were satisfied with the application and recommended the use of a similar application for all CHWs in Lesotho. Main benefits related to task management, access to information, enhanced efficiency, improved decision-making and confidence. Main challenges were limited network and electricity access and lack of a messaging function for direct contact with patients.

Conclusion: Based on the findings of high usability, satisfaction, and ease of use, the open-source application based on the Community Health Toolkit seems a suitable tool for CHW-delivered hypertension and diabetes care.

Profile of the Community-Based Chronic Care Lesotho (ComBaCaL) Cohort: Chronic Disease Prevalences and Risk Factors in Rural Lesotho

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Background: In Lesotho and other low- and middle-income countries, the need for chronic care is increasing due to raising prevalences of non-communicable disease (NCDs) and a persistently high HIV-associated burden. However, population-level data on the dynamics and risk factors of HIV and NCDs is scarce. Innovative, affordable care models are needed in response to the growing care need.

Methods: ComBaCaL is an open, prospective cohort, enrolling inhabitants from 103 randomly selected rural villages in Butha-Buthe and Mokhotlong districts. Using the Trials within Cohorts (TwICs) design, it serves as a platform for nested trials to assess community-based chronic care interventions. At baseline, Community Health Workers (CHWs) supported by a clinical decision support application collected a broad range of socioeconomic and behavioural health determinants.

Results: As of May 31, 2024, the cohort included 5'008 households with 14'735 participants (55% female, median age 19 years). The cohort's socioeconomic status is low with an International Wealth Index of 26, a monthly household income of 42.4 USD and low levels of formal education. Among the 7'917 adult participants, 42.5% were overweight or obese, with higher rates among women, and 33.1% were smokers, with higher rates among men. Self-reported HIV prevalence was 15.1% (98.4% on treatment); hypertension prevalence was 17% (56% controlled); diabetes prevalence was 4% (39% controlled). Among adolescents, there was a high exposure to environmental risk factors, such as indoor air pollution while behavioural risk factor exposure was low.

Conclusion: The ComBaCaL cohort highlights the significant socioeconomic challenges of rural Lesotho compared to global and national standards posing multiple health risks. In addition to the high HIV prevalence, we observed significant rates of hypertension and diabetes with substantial care gaps. The findings enhance the understanding of chronic disease dynamics and inform the development of targeted health interventions in Lesotho and beyond.

Costs and Coverage of Community Health Worker-Led Hypertension and Diabetes Screening in Rural Lesotho: A Cohort Study With a Cost-Consequence Analysis

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Background: Non-communicable diseases (NCDs)—in particular arterial hypertension and diabetes—are a growing burden in low- and middle-income countries (LMICs). Access to adequate care is often limited. Integrating community-based hypertension and diabetes screening and diagnosis into Community Health Worker (CHW) programmes is a promising approach to improve access to treatment in resource-limited settings. However, there is limited evidence on the costs and reach of CHW-led hypertension and diabetes screening interventions.

Methods: As part of the Community-Based Chronic Care Lesotho (ComBaCaL) cohort study, CHWs in 103 villages in rural Lesotho were recruited and trained to offer hypertension and diabetes screening using a tablet-based clinical decision support system. Adults (≥ 18 years) were eligible for hypertension screening, and individuals aged ≥ 40 years or with a body mass index (BMI) ≥ 25 kg/m² were eligible for diabetes screening. We adopted a health system perspective and used a combined bottom-up and top-down approach for the cost-analysis, developing two costing models. The project model includes all research-related costs, while the routine model reflects real-world implementation costs.

Results: After six months, CHWs achieved an 85% (95% CI, 83–87%) screening coverage rate among the 9,053 individuals eligible for hypertension screening and a 92% (95% CI, 89–94%) coverage rate among the 6,045 individuals eligible for diabetes screening. In the project model costs were \$4,385 per CHW per year, \$331 per diagnosis and \$41 per person screened. In the routine model costs were \$3,059 per CHW per year, \$136 per diagnosis and \$17 per person screened.

Conclusion: Trained and equipped CHWs achieve high hypertension and diabetes screening coverage rates in underserved populations in rural Lesotho. The costs are comparable to those of established CHW programmes in Southern Africa. These findings support the integration of CHW-led hypertension and diabetes screening into CHW programmes in LMICs.

Factors Associated With Recent HIV Infections Amongst People Aged 18 and Above Years Who Test Positive for HIV in Lesotho, August 2019 – August 2023

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Background: The HIV/AIDS pandemic, caused by Human Immuno-deficiency virus, has had a profound impact globally, including in Lesotho. With HIV prevalence of 324,000 people in 2020 and an incidence of 5000 people per year for people aged 15 years and above, Lesotho faces an increasing disease burden and challenges in reducing new infections. This study aims to understand the risk factors associated with recent HIV infections among people testing positive for HIV in Lesotho with the objectives of describing social and demographic characteristics of people aged ≥18 years testing HIV-positive and to determine risk factors associated with recent HIV infections among people aged ≥18 years testing HIV positive.

Methodology: This cross-sectional study utilized secondary data from primary study. It focused on people aged ≥18 newly testing HIV positive from August 2019 to August 2023. We compared recent with non-recent HIV-infected people. DHIS 2 generated line list was imported to STATA software version 18 for analysis. Descriptive analysis was performed to characterise new HIV-positive people. Logistic regression performed to determine the factors associated with recent infections.

Results: A significant association was observed for ages 24-34, 35-49 and ≥40 with aOR of 1.36, 2.04 and 2.73 respectively, males with aOR of 1.71, Leribe and Thaba-Tseka with aOR of 0.60 and 0.56 respectively. Individuals who got married at 25-34 years had higher odds of RHI, 1.36 and those with one sexual partner had aOR of 1.23. Date of recent test has a significant association with RHI; last tested in the past 7-12 months, more than 12 months ago, not knowing the date of last test and never tested had higher odds respectively.

Conclusions: The recency rate decreased from 18 % to 5.8% from 2019-2023. The results show a shift within some factors like sex and age, that were regarded as associated with RHI.

The Peripartum Viral Load Cascade and Outcomes of Infants Exposed to HIV in Lesotho

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Background: Programs aiming to prevent vertical transmission of HIV have averted 3.4 million child HIV infections since 2000, but antiretroviral therapy (ART) coverage among pregnant people has changed little over the last decade, and the decline in new HIV infections among children has slowed considerably, with 130,000 cases in 2022. Vertical transmission of HIV can occur prenatally, during labor, or while breastfeeding. A peripartum viral load ≥ 1000 copies/mL is the main risk factor for vertical transmission.

Methods: Participants from the Viral Load Cohort North-East Lesotho (VICONEL) who attended their first antenatal care visit after 31st December 2019, had a delivery before 1st January 2022, and initiated dolutegravir-based ART before delivery, along with their infants, were included in this study. Data was collected through medical chart review of paper-based registers at 20 health care facilities in Botha-Bothe and Mokhotlong districts in Lesotho.

Results: A total of 353 pregnancies among 353 pregnant people with HIV and 357 infants exposed to HIV were recorded. Among 17/353 (5%) with an initial viral load ≥ 1000 copies/mL, a timely follow-up viral load was provided for 4/17 (24%). Among 233/353 (66%) with an initial viral load < 1000 copies/mL, a timely follow-up was provided for 120/233 (52%). For 103/353 (29%) no viral load measurement was available during pregnancy. Overall, peripartum viral load monitoring was guideline-adherent for 157/353 (44%) pregnancies. Among infants exposed to HIV, 301/357 (84%), 274/357 (77%) and 172/357 (48%) received guideline-adherent post-natal ART, timely first infant HIV testing and 9-month HIV testing, respectively. Vertical transmissions occurred in 2/357 (1%) infants.

Conclusion: There were substantial gaps in peripartum HIV service delivery or uptake as well as in HIV prevention and testing of infants exposed to HIV.

Assessing the State of Pharmacovigilance in the Central Region of Lesotho

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Background: The World Health Organization (WHO) Programme for International Drug Monitoring currently counts 50 of the 54 countries in Africa as full and associate members, demonstrating the evolution of pharmacovigilance (PV) on the continent throughout time. Lesotho became full member in September 2024. Pharmacovigilance is crucial for ensuring the safe use of medicines. There is currently no information on the status of PV system in the healthcare facilities in Lesotho.

Objective: The objective of this study was to assess the state of PV systems in the healthcare facilities in the central region of Lesotho with the aim of ensuring safe use of medicines.

Methods: A prospective cross-sectional study was conducted among 76 healthcare professionals in hospitals, clinics, retail pharmacies, and pharmaceutical wholesalers. Indicator-Based Pharmacovigilance Assessment Tool (IPAT) was used to assess the PV systems.

Results: The results showed that none of the hospitals met the minimally functional health facility score of 77%. However, some facilities such as Hospital A (100%), 14 Clinics (62% to 100%) and Retail Pharmacy K (100%) demonstrated strengths in specific areas, such as signal generation and data management. The study highlights the need for improvement in PV systems, particularly in terms of structural, systems, and stakeholders' coordination, risk management and communication, and risk assessment and evaluation.

Conclusion: Pharmacovigilance structures and systems are generally weak across health facilities; as a result, facilities are not able to generate signals, evaluate them and use the information for risk management and communication. Pharmacovigilance structures and systems strengthening in health facilities are highly recommended as a matter of priority. Patient safety can be enhanced through PV by carefully planning and implementing both active and passive strategies.

Keywords: Pharmacovigilance, Indicator-Based Pharmacovigilance Assessment Tool, Lesotho.

Knowledge, Attitudes, and Perceptions Towards Hand Hygiene Practice Amongst Students at a Nursing College in Lesotho

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Background: Hands are critical vectors for microorganisms that cause healthcare-associated infections (HAIs). Hand hygiene, being done the right way, at the right time, and being given the right priority in a healthcare setting is an effective strategy to reduce HAIs and associated costs. Different strategies have been put in place to help improve hand hygiene compliance among healthcare workers; amongst them, continuous training is advised at all levels of care. This study, focusing on nursing students, aimed to describe their knowledge, attitudes, and perceptions towards hand hygiene, highlighting their crucial role in maintaining health and preventing infections.

Methods: This study was a quantitative cross-sectional study. One hundred and fourteen questionnaires were distributed; 103 were filled out and returned by willing students at Maluti Adventist College, thus a 90% response rate.

Results: 62% (64) demonstrated moderate knowledge, all had positive attitudes, and 61% (63) had a positive perception towards hand hygiene. There was a significant (p -value = 0.012) association between knowledge and training.

Conclusions and recommendations: These provide valuable input for enhancing the World Health Organization's (WHO) hand hygiene multimodal strategy, the SAFE LIFE Clean YOUR HAND campaign, and healthcare workers' teaching curriculum. All stakeholders should implement strategies that prioritize knowledge dissemination to promote effective hand hygiene practices among healthcare workers worldwide.

Keywords: knowledge; attitudes; perceptions; hand hygiene; nursing students; healthcare associated infections; preventing infections; healthcare practices; nursing training

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Antibiotic Prescribing in Three Public Primary Healthcare Centres in Maseru, Lesotho

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Background: Inappropriate prescribing of antibiotics is a global problem. We assessed the prescribing patterns of antibiotics in three public primary healthcare centres (PHCCs) in Maseru, Lesotho.

Methods: A cross-sectional point prevalence survey was implemented from October 2022 to December 2022, using patients' prescription booklets. The study was conducted at Thamae, Domiciliary and Lesotho Defence Force (LDF) PHC centres in the Maseru district. Antibiotics were categorised according to the World Health Organization (WHO) AWaRe classification and assessed by Defined Daily Dose (DDD)/100 outpatients/day to measure relative consumption of each antibiotic as a percentage of total consumption, Access-to-Watch index (AW-I) and Amoxicillin Index (A-I)

Results: Of the 624 participants (median age 35 [interquartile range {IQR}: 45–26] years), 71.5% (n = 446) were female. Overall mean (standard deviation [s.d.]) antibiotic consumption was 1.48 (0.13) DDD/100 outpatients/day, with PHCC-1 at 1.64, PHCC-2 at 1.33 and PHCC-3 at 1.47 DDD/100 outpatients/day. The median (IQR) AW-I was 4.64 (3.42–9.45). and the A-I was 1.41 (0.87–1.95). The most frequently prescribed Access group antibiotics included amoxicillin (PHCC-2: 45.9%, overall 1.33 DDD/100 outpatients/day; PHCC-3: 24.5%, 1.47 DDD/100 outpatients/day, and PHCC-1: 23.2%, 1.64 DDD/100 outpatients/day) and doxycycline (PHCC-3: 29.9%, 1.47 DDD/100 outpatients/day, 24.1%, PHCC-2: 1.33 DDD/100 outpatients/ day). Erythromycin was the most prescribed Watch group antibiotic for all PHCCs

Conclusion: High consumption of Access-group antibiotics was observed. The Watch group's antibiotic use, particularly erythromycin, requires the implementation of stewardship programmes. Results may be a baseline for establishing antibiotic stewardship in Lesotho's PHCCs

Table: Prescribing patterns per PHC centre according to AWaRe classification

AWaRe Classification	PHCC-1		PHCC-2 ^a		PHCC-3 ^a			
	DDD/100/ outpatients/ day	% (N = 1.64)	DDD/100/ outpatients/ day	% (N = 1.33)	DDD/100/ outpatients/ day	% (N = 1.46)	Mean	SD
Access	1.35	82.3	1.25	94.0	1.01	69.2	1.20	0.14
							Median	IQR (Q1-Q2)
Watch	0.29	17.7	0.08	6.0	0.45	33.8	0.28	0.18-0.37
AW-I	4.64	-	16.49	-	2.24	-	4.64	3.42-9.45
A-I	2.48	-	1.41	-	0.33	-	1.41	0.87-1.95

PHCC, Primary Healthcare Clinic; DDD/100/ outpatients/ day, DDD per 100 outpatients per day; N, total Defined daily dose per 100 outpatients for each of the PHCC; SD, Standard deviation; IQR (Q1-Q2), Interquartile Range (Q1 Lower quartile, Q3 Upper quartile); AW-I, Access-to-Watch Index; A-I, Amoxicillin Index.

Hair Salons as a Promising Space to Provide HIV and Sexual and Reproductive Health Services for Young Women in Lesotho: A Citizen Scientist Mixed-Methods Study

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Introduction: Adolescent girls and young women in Lesotho are disproportionately affected by HIV and sexual and reproductive health (SRH) challenges, highlighting the need for accessible, de-medicalized community spaces. We aimed to assess the acceptability and feasibility of offering HIV/SRH services at hair salons in Lesotho.

Methods: We used an innovative citizen scientist mixed-methods approach, whereby hair stylists were recruited through social media, completed questionnaires, and recruited women clients aged 15-35 years as respondents. Subsequently, we conducted individual in-depth interviews among 14 stylists and clients, following the rapid thematic analysis framework. Clients and stylists were involved at the design, implementation, and results interpretation stage.

Results: We recruited 157 hair stylists (median age 29; [interquartile range 25-33]; across all ten districts of Lesotho) and 308 women clients (median age 26 [22-30]). Among stylists, 93.6% were comfortable offering oral HIV self-testing (HIVST), 92.4% pre-exposure prophylaxis (PrEP), and 91.7% post-exposure prophylaxis (PEP). Among clients, 93.5%, 88.3%, and 86.4% felt comfortable receiving the above-mentioned services at a hair salon, respectively. Immediate demand was 30.8% for HIVST, 22.1% for PrEP, and 14.9% for PEP. 90.4% of stylists thought that offering HIV/SRH services would positively impact their business. The majority of clients visit their salon once or twice a month. Salons were more accessible than the nearest health facility in terms of cost and time, but only 21.0% have an additional confidential space. Qualitative analysis confirmed high acceptability of hair salons as an accessible, less judgemental space than clinics, but raised concerns regarding confidentiality and stylists' roles.

Conclusions: This study suggests that offering HIV/SRH services in hair salons in Lesotho is largely acceptable and feasible with some addressable barriers. A pilot intervention is warranted to translate these findings into practice.

Awareness and Access Cascades and the role of community-health workers for HIV prevention: A Cross-Sectional Survey Among Adolescents and Adults Living in Lesotho

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Introduction: HIV pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP) may offer effective protection for people at risk of acquiring HIV. Uptake of PrEP and PEP in Southern Africa remains low, a region with the highest burden of HIV transmissions globally. We assessed awareness and uptake of PrEP and PEP among adolescents and adults living in rural villages in Lesotho.

Methods: We conducted a cross-sectional survey to determine knowledge and use of PrEP and PEP and to assess prospective acceptability of community health worker (CHW)-delivered HIV prevention services. This study presents HIV prevention cascades to demonstrate gaps in prevention coverage in eligible populations and the potential role of CHWs to improve knowledge and subsequent uptake of prevention services.

Methods: We conducted a cross-sectional, household-based survey of 1084 adults (>15 years) in 10 remote villages in two districts in northeastern Lesotho. Data were collected between April and September 2024, and all participants living in the villages during this period were included in the study. Data were directly entered into an Open Data Kit (ODK) data collection software loaded onto an Android device. We assessed knowledge and awareness of HIV pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP), family planning, contraception and integrated services including dual prevention products (e.g., the dual prevention pill), as well as the acceptability of services provided by CHW. The data were analysed using descriptive statistics and multivariate logistic regressions were used to estimate adjusted odds ratios (aORs) and 95% confidence intervals (CIs) for associations with PrEP and PEP awareness.

Results: Overall, 1'083 people participated in the survey (median age 39 years; interquartile range: 23,60 years, 470 male (43%), 243 reported to be at risk for HIV (22%)). Among those at risk, 101 (46%) were aware of PrEP, 24 (24%) had been offered PrEP previously, 21 (88%) of those had taken PrEP at least once, and 17 (81%) of those were taking PrEP at the time of the survey. Total PrEP prevalence among the eligible population was 17 out of 218 (8%). *PEP cascade:* Among 201 survey respondents at substantial risk of HIV infection and not taking PrEP, 54 (27%) were aware of PEP, of these 24 (44%) stated interest in receiving PEP in the event of HIV exposure and 5 (21%) had previously taken PEP. Overall, among 201 at substantial risk for HIV acquisition 5 (2%) had ever taken PEP. Women and participants higher levels education were more likely to be aware of PrEP and PEP and participants who were married, or cohabiting were more likely to be aware of PEP compared to those who are not married or cohabiting. Acceptability of CHW-delivered services was higher than 80% for HIV prevention interventions.

Discussion: There is a substantial gap between knowledge and provision of HIV prevention services among people at risk for acquiring HIV. Opportunities to address both prevention knowledge using CHWs may improve access to PrEP and PEP.

Assessment of Prognosis of CKD Progression in People living with HIV Co-Morbid Hypertension and Diabetes Mellitus in two Lesotho Clinics

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Background: Chronic kidney disease (CKD) is a significant public health issue globally, with an increasing burden in low-income countries like Lesotho. The condition is often exacerbated by comorbidities such as diabetes mellitus, hypertension, and HIV. However, their combined impact on CKD prognosis remains inadequately understood.

Aim: The study aimed to assess the prognosis of CKD in individuals living with HIV, HTN, and DM as determined with CKD-EPI and MDRD equations in public clinics in Maseru, Lesotho.

Method: A retrospective cross-sectional study was conducted using medical records from both the Lesotho Defence Force clinic and the Domiciliary clinic. Adult patients living with HIV and comorbid HTN and/or DM were included. Patient demographics (age, gender) and laboratory data (e.g., creatinine, urea, electrolytes) were collected, and eGFR was calculated using CKD-EPI and MDRD equations.

Results: A total of 277 medical records were analysed, comprising 147 from the Lesotho Defence Force clinic and 130 from the Domiciliary clinic. Among those from the LDF clinic, 82 medical records were complete. 53.1% were female and 46.9% were male. In LDF clinics, HIV only patients were in CKD stage 2, both with HIV and HTN were in CKD stage 3a, and those with HIV, HTN, and DM were in CKD stage 3b. At the Domiciliary clinic, 56.7% were female and 43.1% male. HIV only patients were in CKD stage 1, both with HIV and HTN were in CKD stage 2, and those with HIV, HTN, and DM were in CKD stage 3a.

Conclusion: The study revealed HIV, HTN and DM are major risk factors for the development of CKD in the middle-income countries. Early detection and effective management are essential for better prevention. The CKD-EPI is the best practical tool for evaluating CKD stages.

Key words: Comorbidity, mortality, Chronic Kidney Disease, prognosis, CKD-EPI

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