VL MENTORSHIP MODEL

17TH AWACC 2025

30 OCTOBER

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KWAZULU-NATAL DEPARTMENT OF HEALTH

COMPETENCY-BASED FRAMEWORK FOR MENTORSHIP AND SUPPORTIVE SUPERVISION IN PRIMARY HEALTHCARE

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HEALTH
REPUBLIC OF SOUTH AFRICA

KwaZulu-Natal Department of Health
KZN Department of Health
kznhealth
@kznhealth

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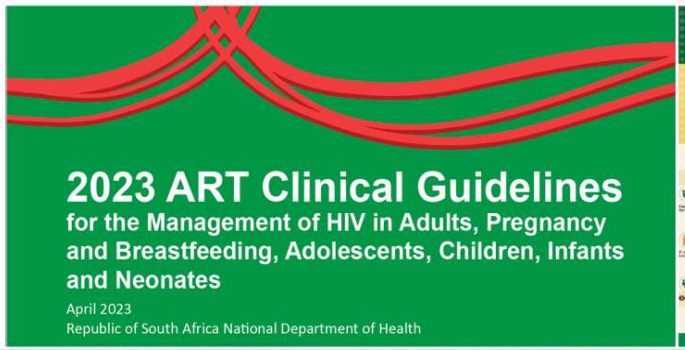

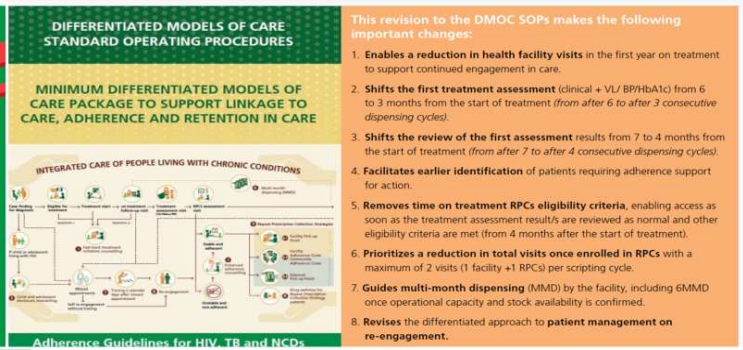

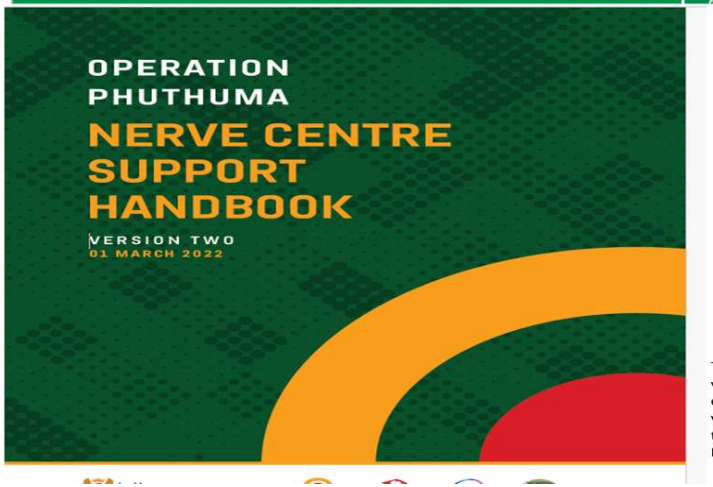

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

TOWARDS THE THIRD 90 –IMPROVING VIRAL LOAD COMPLETION AND SUPPRESSION RATES

Henry Sunpath
Student number: 913491761

Supervisors
Prof K Naidoo
Prof MYS Moosa

Submitted in fulfilment of the requirements for the degree of Doctor of Philosophy in the School of Clinical Sciences, Nelson Mandela School of Medicine, University of KwaZulu-Natal.
19 January 2023

The UNAIDS 95-95-95 program recommends universal ART for epidemic control while maintaining virological suppression. We addressed obstacles impeding virological management arising from the complexities in individual patient management and the health systems. We identified the clinic level viral load champion model as a simple ,scalable and sustainable alternate strategy to attain the third 95 through identification of viraemic patients for efficient triage to enhance efforts to reduce HIV transmission and ART resistance.

Clinical and Mortality Audit: Reach and Methodology

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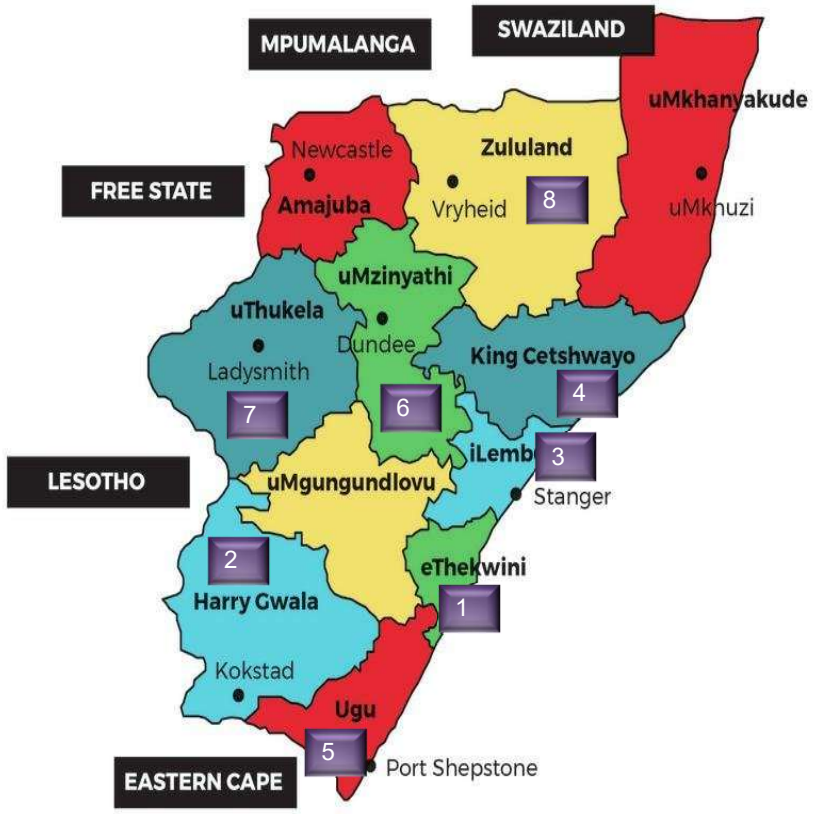
District	Clinical audit	Mortality audit
1. eThekwini	• Inanda CHC • Prince Mshiyeni Memorial Hospital • Osindisweni Hospital	• Prince Mshiyeni Memorial Hospital • Osindisweni Hospital
2. Harry Gwala	• Christ the King Hospital • Rietvlei Hospital	
3. iLembe	• Montebello Hospital	• Montebello Hospital
4. King Cetshwayo District	• Catherine Booth Hospital	• Catherine Booth Hospital • Ngwelezane Hospital
5. Ugu	• CJ Crookes Hospital • Gamalakhe CHC • Murchison Hospital	
6. uMzinyathi	• Charles Johnson Memorial Hospital • Dundee Hospital • Greytown Hospital	• Charles Johnson Memorial Hospital • Dundee Hospital • Greytown Hosptial
7. uThukela	• Emmaus Hospital • Estcourt Hospital • Ladysmith Hospital	• Emmaus Hospital • Estcourt Hospital • Ladysmith Hospital
8. Zululand	• Benedictine Hospital • Ceza Hospital • eDumbe CHC • Isthelejuba Hospital • Nkonjeni Hospital • Vryheid Hospital	• Thulasizwe Hospital



Findings: Clinical Audits

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Findings: Mortality Audits

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- **Staff rotation**

Missed clinical opportunities: Failure to perform VL test and /or act on high VL result

Same as clinical audit findings

- **Limited multidisciplinary team** involvement

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MENTORSHIP AGREEMENT FOR EXAMPLE TRAINING

This agreement is between a **Mentor** who is an experienced practitioner in providing EXAMPLE and a **Trainee** who is leaning to provide EXAMPLE at PHC facility level.

Mentor Details	
Name	
Facility	
Contact Number	
PERSAL Number	
SANC Number	

Trainee Details	
Name	
Facility	
Contact Number	
PERSAL Number	
SANC Number	

Competencies to be mastered:

- Management of VL – roles and responsibilities at each ART site
- Management of VF -clinical and psychosocial support
- Data flow management
- Down and up referral systems /processes for PLWH with coinfections /comorbidities (SOP)
-

Agreement:
We agree to work together to the point where the Trainee has demonstrated mastery of the competencies above. This collaboration will entail direct observation and the provision of immediate feedback.

Mentor Sign:
Date:

Trainee Sign:
Date:

Commitment by Facility Manager:
I am aware of the agreement between the Mentor and Trainee and will work to create a supportive environment in which to practice the competencies. Facility Name:
Facility Manager Name:
Facility Manager Signature:

MENTORSHIP ALGORITHM FOR EACH DISTRICT

DISTRICT HAST COORDINATOR

- OVERALL SUPERVISION AND REPORTING BACK TO PROVINCE
- TRAIN PHC SUPERVISORS TO ADMINISTER FILE AUDIT TOOL at each facility -hospital OPD /HAST clinic ; CHC ,and PHC in the district

HAST DOCTOR IN THE DISTRICT OFFICE AND HAST DOCTOR(AWACC ATTENDEE)

- TO DESIGN A PLAN FOR TRAING OF ALL DOCTORS IN THE HOSPITAL; HAST UNIT /OPD, EACH CHC AND PHC -NHI doctors
- TO DESIGN WITH OTHER PN (maybe AWACC attendee) A PLAN TO TRAIN ONE PN IN THE HOSPITAL HAST UNIT /OPD , EACH CHC AND PHC

PN THAT HAS BEEN TRAINED IN EACH HOSPITAL /CHC AND PHC

- Train all other staff in the unit -PN ,ENA.EN and EAC counsellors and data capturers

SUBJECTS TO VE COVERED

VL MANAGEMENT

- IMPROVING VL MANAGEMENT USING THE SOP FOR CLINICAL CARE AND COUNSELLING WITH THE TOOLS AND REGISTERS.
- PATIENT FLOW AND TRIAGE IN THE CLINIC FOR VL MANAGEMENT AND DATA FLOW

IMPROVING RETENTION IN CARE BY FOCUSSING ON CONTINUITY IN CARE

- UPREFERRAL AND ADMISSION SOP FROM TO CHC OR HOSPITALS -REFERRAL LETTERS
- DOWN REFERRAL TO PHC/ OPD FOR FOLLOW UP - DISCHARGE SUMMARY

NOTE:

- EACH TRAINER TO ENSURE THAT THE COMPETENCY BASED ASSESMENT TOOL HAS BEEN SIGNED BY THE TRAINER , STAFF AND UNIT HEAD AND KEPT IN FILE FOR HR RECORDS
- ENSURE THAT WHEN THERE IS STAFF ROTATION AND NEW STAFF ARE EMPLOYED

ADRENERGY RESEARCH INNOVATIONS

CAPRISA

CENTRE FOR THE AIDS PROGRAMME OF RESEARCH IN SOUTH AFRICA

UNAIDS

CAPRISA is the UNAIDS Collaborating Centre for HIV Research and Policy

LAUNCH OF THE KZN HIV VL AND DR MONITORING PROJECT

INTRODUCING THE VL CHAMP

MAKING VL MONITORING ROUTINE AND MANAGING HIGH VL

Dr.Henry Sunpath

Infectious Diseases Unit –NRMSM –UKZN

DIRECTOR MEDICATE –AIDS NPC T/A AWACC

CONSULTANT CAPRISA - ACC

AWACC 2017 -2019

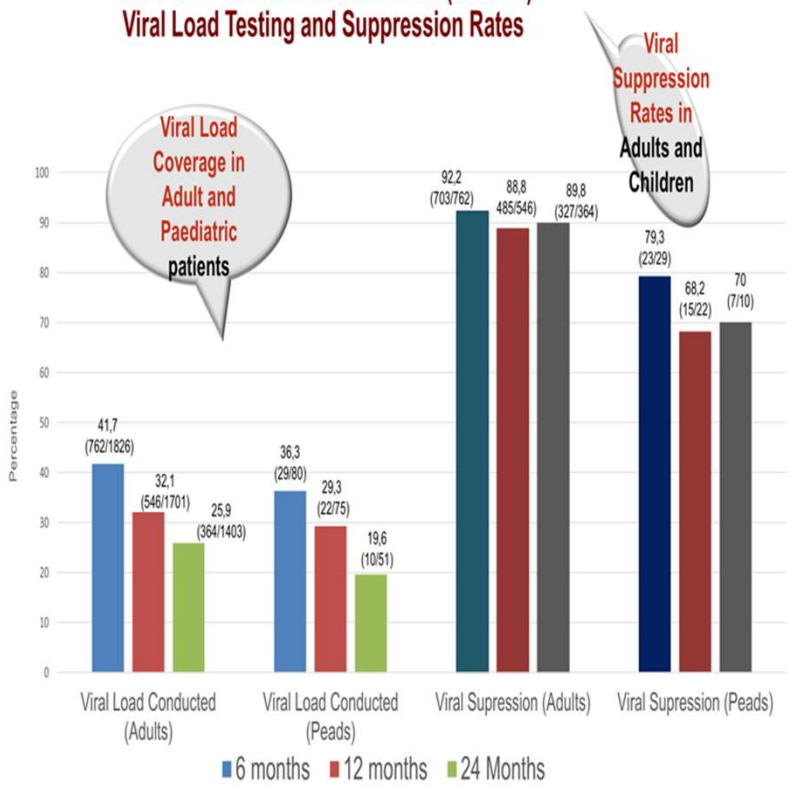
PROVINCE OF KWAZULU-NATAL
ISIFUNDAZWE SAKWAZULU-NATALI

DEPARTMENT OF HEALTH & HUMAN SERVICES-USA

CDC CENTERS FOR DISEASE CONTROL AND PREVENTION

CAPRISA CENTRE FOR THE AIDS PROGRAMME OF RESEARCH IN SOUTH AFRICA

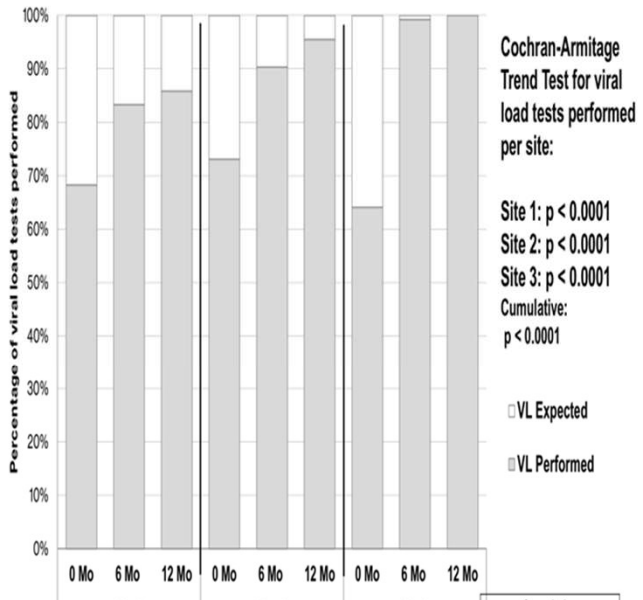
CAPRISA : FILE &FACILITY AUDIT (2015-16)
Viral Load Testing and Suppression Rates



1.1. Naidoo K, Sunpath H. CAPRISA Advanced Clinical Care: strategies to optimize identification of unsuppressed viral load in patients on second-line antiretroviral therapy. Data Use Innovations and Best Practices Workshop. ([https://za.usembassy.gov/wp-content/uploads/sites/19/S11_1425_NaidooK_Strategies-to-optimize-ID.pdf

Viral Load Tests Performed Among Those eligible for VL Testing -3 pilot ART sites (eThekwini 9872 pts)

Sunpath H, Hatlen TJ, Naidu KK, Msimango P, Adams RN, Moosa M-YS, et al. Targeting the third "90": introducing the viral load champion. Public Health Action. 2018 Dec 21;8(4):225–3



	Site 1		Site 2		Site 3		Cumulative	
0 Mo								
VLP/VLE	140/205	68%	84/115	73%	323/504	64%	547/864	63%
VLS/VLP	112/140	80%	78/84	93%	307/323	95%	497/547	91%
6 Mo								
VLP/VLE	995/1194	83%	793/878	90%	3101/3124	99%	4889/5196	94%
VLS/VLP	840/995	84%	758/793	96%	2996/3101	97%	4594/4889	94%
12 Mo								
VLP/VLE	2262/2636	86%	1742/1824	96%	6636/6636	100%	10640/11096	96%
VLS/VLP	1920/2262	85%	1646/1742	94%	6519/6636	98%	10085/10640	95%

Sustained improvements in Viral Load Monitoring with Health Systems Strengthening: Experiences from the KwaZulu Natal ART Programme …NDOH research day 2021 …Authors: Jaqueline Ngozo[1], Marothi Letsoalo[2], Farzana Osman[2], Henry Sunpath[4], Kogieleum Naidoo[2,3]

Targeted health systems strengthening intervention with the VL champion model demonstrated significant improvements in VL monitoring compared to the pre-intervention period.

Results. :

KZN –Among 616 facilities in 11 health districts,=

VL testing coverage was 75.5% - improved by almost 10% during the intervention versus pre-intervention period, p<0.001, IRR 1.095 (CI: 1.05 – 1.14). 2017-2018

In the eThekwini District =

VL testing coverage was 78.6% improved by 5% during the intervention versus pre-intervention period p=0.1178, IRR 1,046 (CI: 0.98 – 1.11).

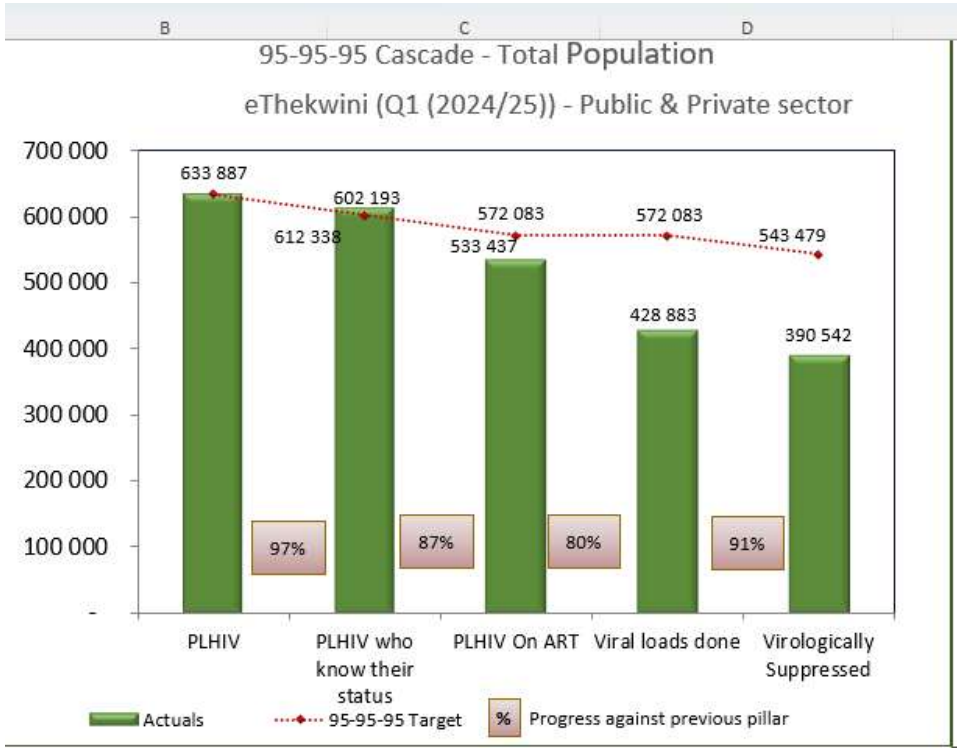
Viral Load Monitoring for People Living with HIV in the Era of Test and Treat: Progress Made and Challenges Ahead – A Systematic Review

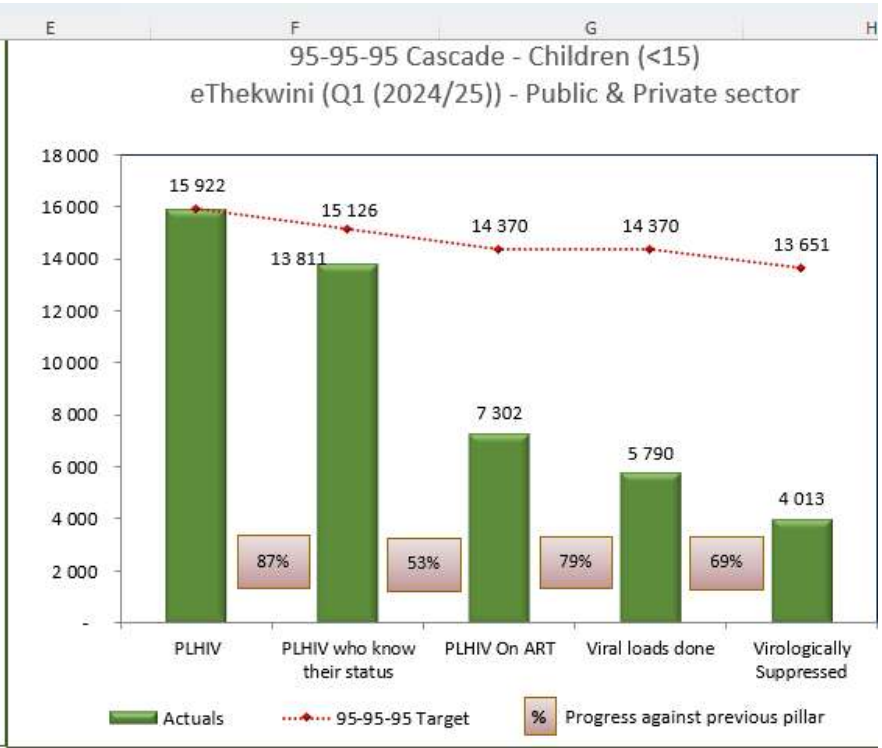
Minh D. Pham Huy V. Nguyen David Anderson Suzanne Crowe Luchters

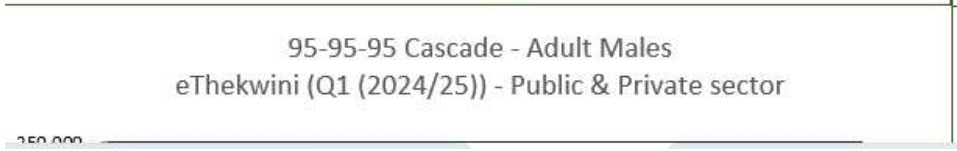
Posted Date: November 30th, 2021 /DOI: https://doi.org/10.21203/rs.3.rs-1091142/v1

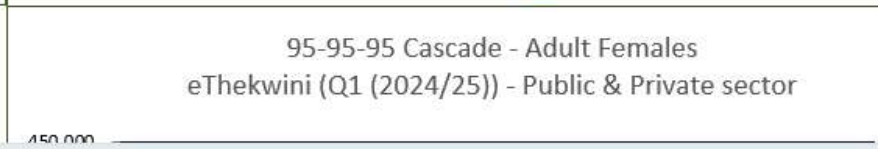
- **Suboptimal uptake of follow-up VL after** initial elevated VL (median 66%, IQR: 38–77%);
- **High proportion of confirmed treatment failure those who had a follow-up VL** (median 62%, IQR: 50–75%)
- **Low switching rate** among those with confirmed treatment failure (median 45%, IQR: 36–71%).
- Possible causes - **inadequate EAC and/or poor implementation of VF cascade**

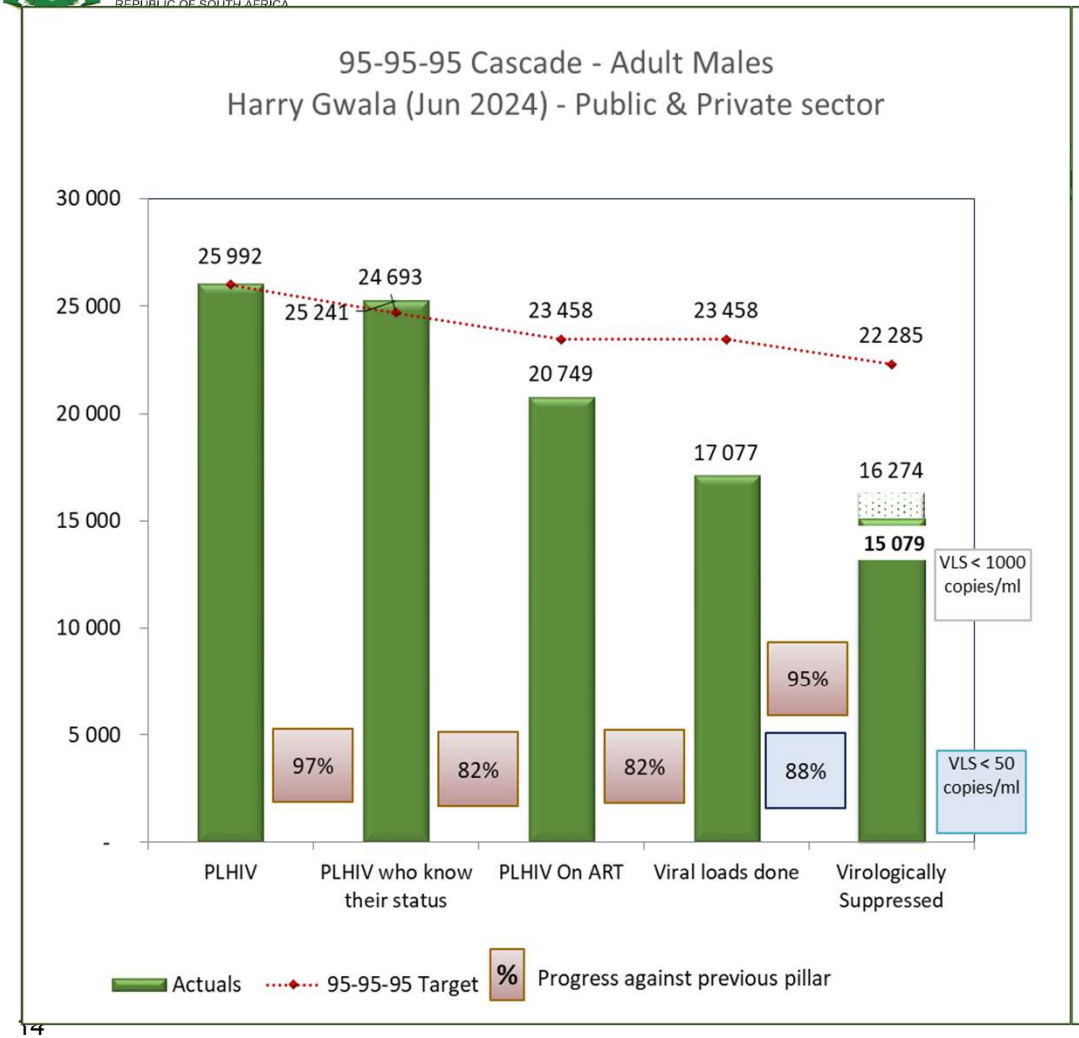
Operations research and intervention strategies (facilty and community based)- needed to address the failure cascade and preserve the efficacy of first/second line ART

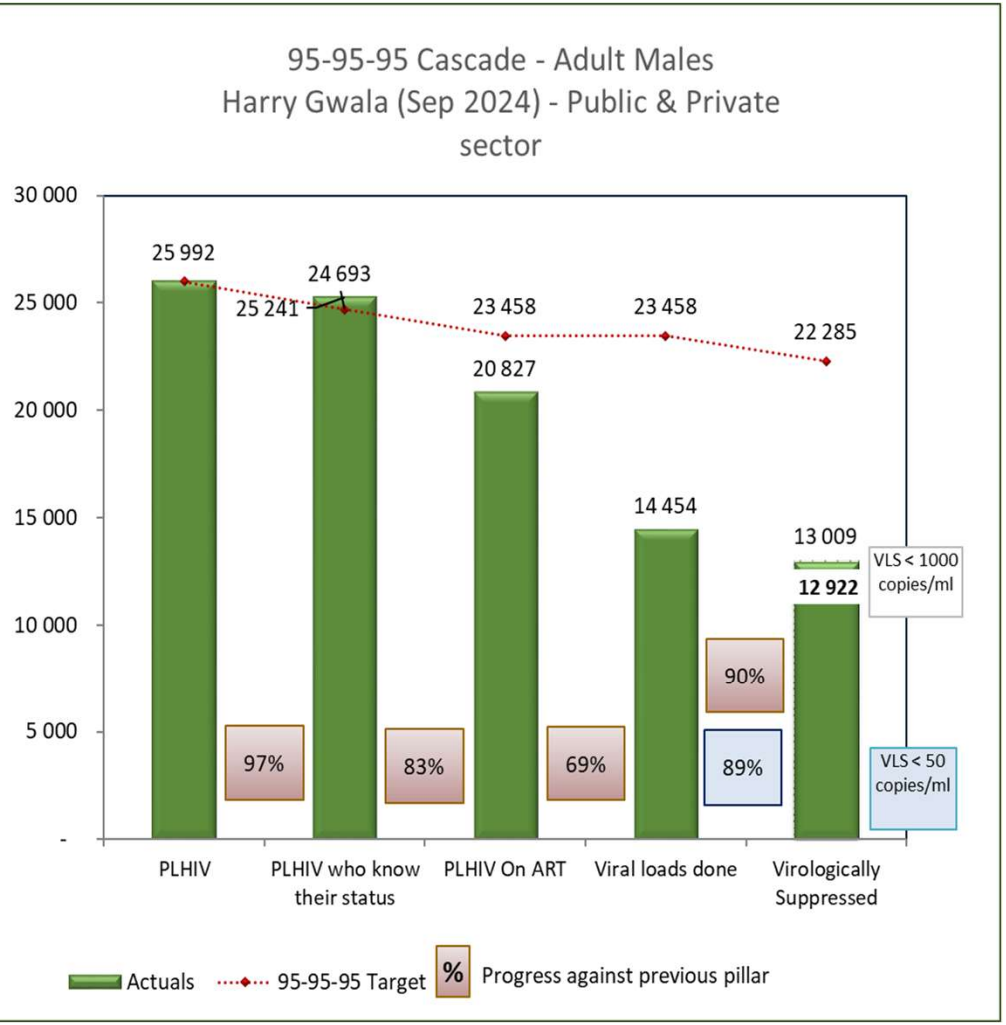

95-95-95 Cascade - Total Population
eThekwini (Q1 (2024/25)) - Public & Private sector
700 000
600 000
500 000
400 000
300 000
200 000
100 000
-
633 887
612 338
602 193
533 437
572 083
572 083
428 883
543 479
390 542
97%
87%
80%
91%
PLHIV
PLHIV who know their status
PLHIV On ART
Viral loads done
Virologically Suppressed
Actuals
95-95-95 Target
%
Progress against previous pillar


95-95-95 Cascade - Children (<15)
eThekwini (Q1 (2024/25)) - Public & Private sector
18 000
16 000
14 000
12 000
10 000
8 000
6 000
4 000
2 000
-
15 922
13 811
15 126
14 370
14 370
13 651
7 302
5 790
4 013
87%
53%
79%
69%
PLHIV
PLHIV who know their status
PLHIV On ART
Viral loads done
Virologically Suppressed
Actuals
95-95-95 Target
%
Progress against previous pillar


95-95-95 Cascade - Adult Males
eThekwini (Q1 (2024/25)) - Public & Private sector


95-95-95 Cascade - Adult Females
eThekwini (Q1 (2024/25)) - Public & Private sector


95-95-95 Cascade - Adult Males
Harry Gwala (Jun 2024) - Public & Private sector
30 000
25 000
20 000
15 000
10 000
5 000
-
25 992
25 241
24 693
23 458
23 458
22 285
20 749
17 077
16 274
15 079
97%
82%
82%
95%
88%
VLS < 1000 copies/ml
VLS < 50 copies/ml
PLHIV
PLHIV who know their status
PLHIV On ART
Viral loads done
Virologically Suppressed
Actuals
95-95-95 Target
%
Progress against previous pillar


95-95-95 Cascade - Adult Males
Harry Gwala (Sep 2024) - Public & Private sector
30 000
25 000
20 000
15 000
10 000
5 000
-
25 992
25 241
24 693
23 458
23 458
22 285
20 827
14 454
13 009
12 922
97%
83%
69%
90%
89%
VLS < 1000 copies/ml
VLS < 50 copies/ml
PLHIV
PLHIV who know their status
PLHIV On ART
Viral loads done
Virologically Suppressed
Actuals
95-95-95 Target
%
Progress against previous pillar

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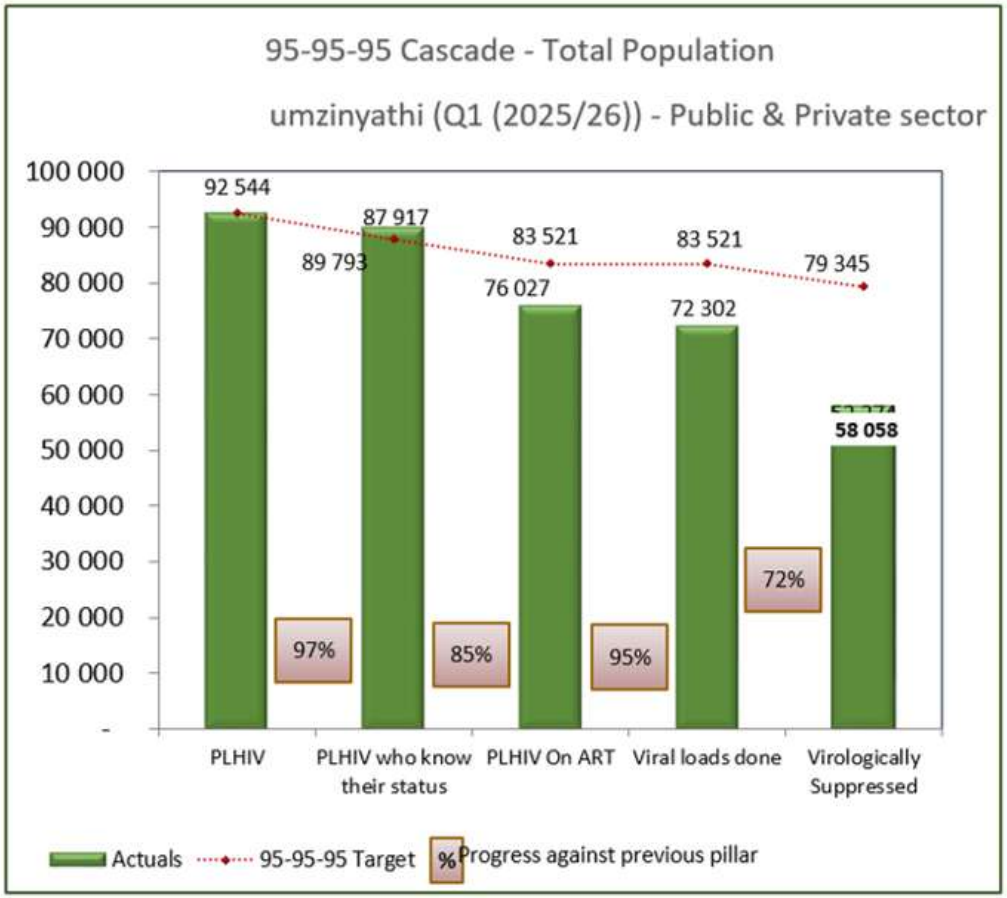
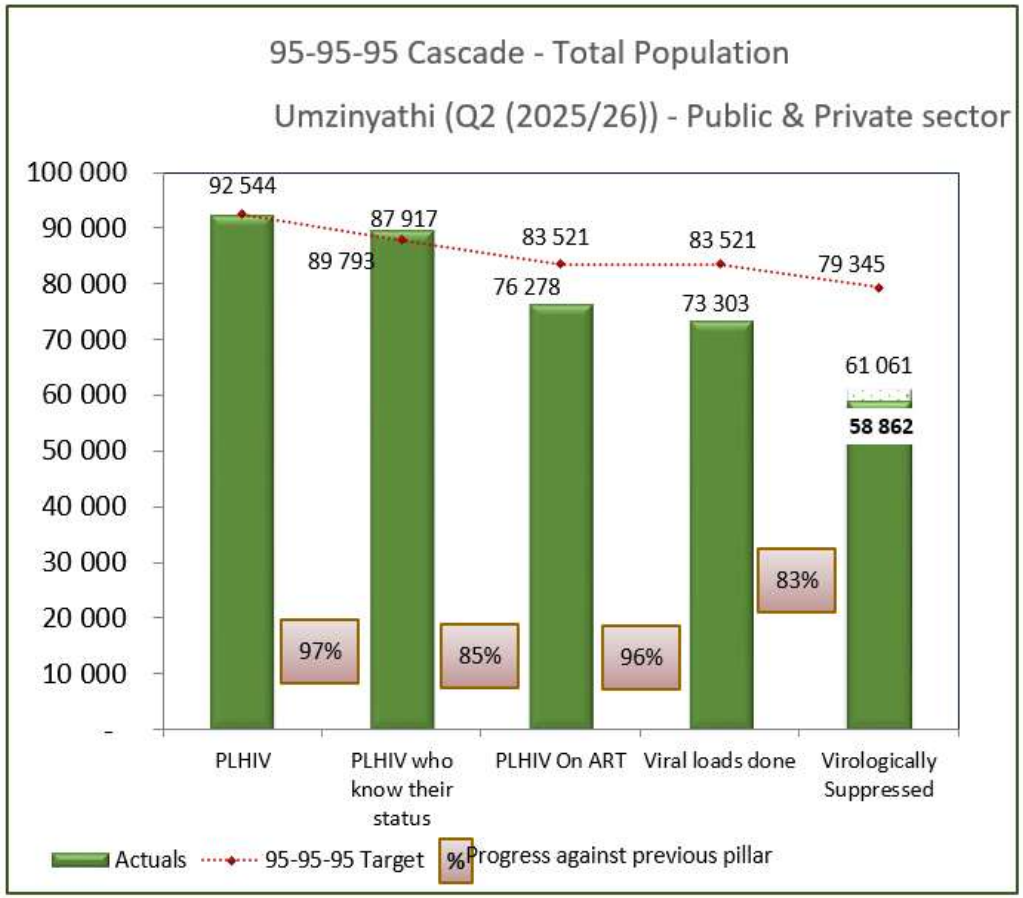
VIRAL LOAD COMPLETION

Indicator name	Baseline 2023/2024	Annual Target 2024/2025			Robot Highlight: Green OR Red Q1 (24/25)	Robot Highlight: Green OR Red Q2 (24/25)
Viral Load Completion	79,6% 2 068/2 597	95%	Q1 (2024/ 2025)	Q1 (2024/ 2025)		
			82,8% 463/559	69,4 315/454		
Reasons for Deviations	• Poor retention of clients/ clients not done VL due to missing their visits • Taking of VL out of cohort • NHLS cyber attack.					
Remedial action Reported in Q1 (2024/25)	• Reinforcement of guidelines on taking of viral loads • Tracking and tracing of missed visit clients for VL and retention to care. • Training of OTL and LC on AGLs and home visits for community VL					
Remedial Action for Q2 (2024/25) (Remedial Action, must address reasons for deviations)	• Develop district recovery plan/ catch up plan for clients that missed their viral load blood draw • Engage with NHLS Business manager and sub-district Laboratory managers to fast-track outstanding results			By Who: HAST/TB coordinator Adherence Facilitator		By When: 30/11/24
NB: Progress report on (Activities) committed in Q1 – Q2 (2024/25)	5 high volume facilities with 1350 outstanding results in total ACC and management of VL training conducted on 17-19 September 2024					

HIV Treatment Cascade Total population





VL MAMNAGEMENT -SERVICE DELIVERY PROCESS
SERVICE DELIVERY PRPOCESS Functional booking system Effective process to highlight patients due for VL Effective blood results management process and actioning of abnormal results Managing missed VL appointments Planned patient flow ? Bloods prior consultation
STAFF COMPETENCY AND CAPABILITY All clinicians to be trained on interpreting blood results All clinicians cognisant of process to support VL management NIMART trained nurses to adapt ART treatment due to abnormal results
DATA SYSTEM Print VL due reports to manage patients expected within that month Print the VL outstanding report to follow up on expected blood results Clinician to record results in patient file Manage file flow process between consultation rooms and data capturing points
RESOURCES AND SUPPLIES Lab materials Access to LAB TRACK
TEAM WORK Effective communication between facility and laboratory Integration and coordination of multidisciplinary team supporting VL management
PATIENT ENGAGEMENT Routine provision of health education U=U campaign

List of Appendices to Proposed SOP for VL management in TLD 1 ,TLD2 and TLD2F regimens

- VL register for TLD 1 and TLD 2 and adherence <80 % with first VL> 60 c/ml
- VL register for TLD 2 and adherence > 80% and VL > 1000 c/ml and 500 -999 c/ml
- VL register for TLD2F regimens

SOP for VL management in the era of DTG regimens

Patient flow pathway in the clinic

Responsibilities of VL champion

REGISTER 1A: MANAGEMENT OF TLD 1 and TLD 2 WITH THE FIRST VL ≥ 50 c/ml after start /change of ART (M0)

On TLD 1 0r TLD2 (non PI regimen)-follow as per guidelines below

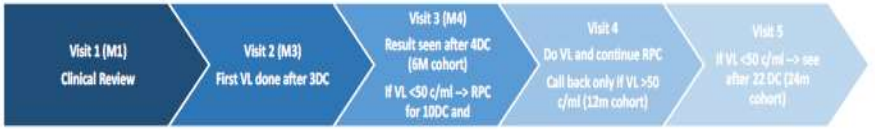
Patient Name	Clinic Number	ID Number	Contact number x 2	VL test M3 Date	VL result M4	EAC 1 Date	EAC 2 Date	EAC 3 Date	EAC 4 Date	EAC 5 & VL test Date	Outcome & Date:

REGISTER 1 B : MANAGEMENT OF TLD 1 and TLD 2 WITH THE FIRST VL ≥ 50 c/ml after start /change of ART (M0)

NB.1. PI regimen for more than 2 years, VL < 1000 c/mL – -Switch to DTG-containing regimen. If VL in last 12 months > 50 c/mL, continue to switch same day, provide EAC if needed, and repeat the VL after 3 months and guidelines below

NB.1 Two or more VLs > 1000 c/mL more than 2 years ;-Adherence less than 80% - Switch toa DTG-containing regimen . Repeat the VL after 3 months and guidelines below

Patient Name	Clinic Number	ID Number	Contact number x 2	VL test M3 Date	VL result M4	EAC 1 Date	EAC 2 Date	EAC 3 Date	EAC 4 Date	EAC 5 & VL test Date	Outcome & Date:



REGISTER 2: MANAGEMENT OF PATIENTS WITH TLD2F

After GRT results and individualised regimen -VL after 3 months then as determined by clinician depending on VL

Two or more VLs ≥ 1000 c/mL taken two or more years after starting PI regimen - adherence more than 80%. Do a resistance test.

Discuss with an HIV expert to authorize and interpret a resistance test and provide individualized regimen. Repeat VL 3 months .

Patient Name	Clinic No	ID No	Contact no x 2	Regimen Date started	EAC 1 Clinical review Date	EAC 2 Date	EAC 3 Do VL Date	EAC 4 VL result Review Date	Date	Date	NEXT VL At 6 months annually	Outcome & Date:

Developed in Partnership with: ADDERLEDGE

QA Tool 1: ADULT ARV CHART REVIEW

Date: _____

ne of Reviewer		Designation	
ility Name		File No	

A. Initiation Visit for current regimen (Mark X to denote completed, ND to denote no evidence of completion or N/A if test was not required)

een	Done	Abnormal Test actioned	Blood Test/screen	Done	Abnormal Test actioned	Blood Test/screen	Done	Abn Test actio
			Urine dipstix			Cr Cl		
			Preg test			ALT		
l			TB Screen			Hep B SAg		
O Stage			STI screen			Chol (f)		
amination			HB/FBC			Trig (f)		

B. TB Screening, Management and IPT Completion

Was TB Screening completed?					YES		NO
% of visits TB Screening done	0%		<50%		>50%		All
Were they pregnant at baseline?	Yes		No		CD4 <100	Yes	
GXP done in all pregnant patients	Yes		No				
Was IPT initiated?	No - Active TB				YES		NO
If IPT started, number of Months of IPT completed							
Any DSTB on Aluvia/DTG/Atazanavir/Darunavir					Yes	No	N
Were the doses of Aluvia doubled during DSTB Rx?					Yes	No	N
Were Aluvia doses reduced 2 weeks after DSTB Rx end?					Yes	No	N
Were the doses of Dolutegravir doubled during DST Rx					Yes	No	N
Did they get Rifabutin while on Atazanavir or Darunavir?					Yes	No	N

C. VL Coverage and Suppression (Mark appropriate column with an X)

Patients current ART regimen		Months on Regimen	

D. Mark with X if VL was done next to the month. Add result below if applicable

nth 6		Month 12		Month 24		Month 36		Most recent
sult		Result		Result		Result		Result
epeated If ≥ Y/N)		VL repeated If ≥50 (Y/N)		VL repeated If ≥ 50 (Y/N)		VL repeated If ≥ 50 (Y/N)		VL repeated If ≥50 (Y/N)
sult		Result		Result		Result		Result

E. Management of Switch from 1st Line ART to TLD

VL result before switch to TLD in c/mL		VL completed within 6 months before switch to DTG? (Y/N)	
Patient is ≥ 10 years of age	YES		NO
Patient is ≥ 35kg	YES		NO
Creatinine clearance result			
Documentation of Counselling about DTG for women	YES		NO
Pregnancy excluded before starting DTG	YES		NO

VL MANAGEMNET -PATIENT FLOW IN THE CLINIC	
PREPARATION	
NICD releases weekly RFA reports. DR/NSM access the RFA list weekly and share it with VLC VLC share the list with data clerk/facility support Officer for files retrieval DC/FSO submits files to VLC, VLC separate the files according to VL results. VLC gives EAC Hi VL files for tracing and tracking. A filing space in the filing room to be dedicated (Bin) for the HI VL files until the action is taken When hard copies of VL results are available -the Linkage Officer /EN should place them un the patient files . VLC will give lists of HI VL to EAC counsellor to enter onto appropriate high VL register - 1,2,3 Once the HI VL is actioned, the file should be filed back to the general filling room VLC –Check/monitor the files in the dedicated high VL filing cabinet (Bin) weekly to identify those patients who did not come in and call them -get LO to call patients	**STEP 1- Patient** Arrives as per appointment after being contacted for VL check up Triaged to AC in a separate queue Come for next appointment given on the appointment card and inform staff of any changes to contact or address or if travelling Return file to pharmacy at each visit or leave **STEP 2 -Admin/Data clerk (AC)** Maintains a separate filing system for patient files with high VL . When patient discharged by clinician for follow up - replace files in the general filing system If a patient arrives for consultation on an unscheduled visit -and the file in not found in the general filing room -to among the HVL files DO NOT OPEN A NEW FILE. At the end of each day to hand over files to DC for entry into Tier.net REFER ALL patients first to EAC counselling team

STEP 4 -CLINICIAN	STEP 3 - EAC team -counsellor
Confirm EAC was done Review VL result (hard copy or on phone) if required Enter the VL result on the longitudinal chart and manage as per guidelines Send patient for VL blood draw if scheduled during that visit Thereafter review medication script and renew /dispense Provide date for next clinic visit given on the appointment card. **Completion of high VL register must be done daily together with the EAC counsellor** **STEP 5 : FOLLOW UP=LINKAGE OFFICERS** **Examine the high VL register weekly with the VLC and call patients who have missed visits for EAC , Blood tests ,clinical review or medication.** **Maintain a call log and report LTFU**	Engage with patient in a non judgmental way u worksheets as aguide Education on abnormal result and common cau treatment failure Assess and address barriers to adherence. Review adherence plan and set new treatment Inform patient about tracing and retention in c Engage social worker /psychologist as required Complete HVL register daily and make entry or notes for other staff **Completion of high VL register must be done d** **together with the EAC counsellor** **Patients role** Express barriers to adherence and potential re treatment failure Review and adapt adherence plan with counse REFER TO CLINICIAN

RECOMMENDATIONS FOR ACTION IN EACH ART SITE
see HST talk on VL data base management day 2 AWACC

1) At baseline - audit of all patient files in the facility to establish when the last VL was done
2) Was a repeat VL done and appropriate action taken?
3) Make a note of those who have not returned and investigate reasons
4) Has Timely VL monitoring and ongoing adherence measures been undertaken for those with VL within 50 – 999
5) Consider community-based models of care CCMDD and repeat scripts for those with VL<50 as per guidelines
6) Follow SOPs and use /adapt tools for VL monitoring
7) Conduct file audits every month for three months and them quarterly and report to district coordinator –through PHC supervisors or other accepted channels ? Nerve centre