Trainings to support the National Integrated TB/HIV Information System Implementation

TLD 1/TLD 2 & VL Capturing in TIER.Net Clinical Guideline Changes 2023

Date: 20 September 2023
Venue: Knowledge Hub (Virtual)

Objectives

Update on ART Clinical Guidelines VTP Guidelines

- To provide guidance on Implementing optimized regimens and Viral load monitoring

Capturing of TLD/ALD 1 & TLD/ALD 2 onto TIER.Net

- To demonstrate TIER.Net >10 years Capturing
- To demonstrate TIER.Net <10 years Capturing
- To provide guidance on Data Reporting

Management of Viral Loads Results

- To discuss Caveats to the Viral Load results management rules in TIER.Net

Management of Viral Load in TIER.Net

- To discuss the Viral Load journey
- To provide guidance on Viral Load capturing on TIER.Net from Clinical source
- To provide guidance on Data Quality – Viral Load
- To view Reports on program quality – Viral Load

Agenda

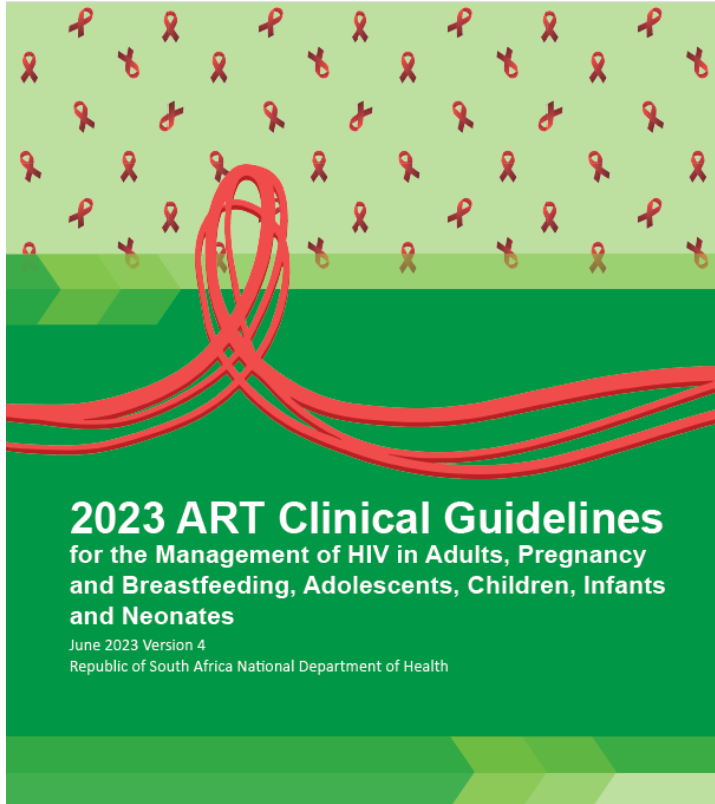| Time	Topic	Speaker
13:00 – 13:10	Welcome	Mrs Thabile Msila
13:10 – 13:15	Introduction of panelist and speakers	Dr Tshepo Molapo
13:15 – 13:20	Objectives of the session	Dr Tshepo Molapo
13:20 – 13:30	Background into the revised ART guidelines regarding TLD 1 and TLD 2 and ALD	Dr Zamazamela Shelembe
13:30 – 14:00	TLD 2 and ALD capturing	Mr Matthew Chetty
14:00 – 14:10	Background into the revised ART guidelines regarding VLD monitoring revisions	Dr Zamazamela Shelembe
14:10 – 14:40	VLD capturing in various cohorts	Mr Matthew Chetty
14:40 – 14:55	Questions and Answer Session	All
14:55 – 15:00	Summary and take-home messages	Dr T Molapo & Mrs Thabile Msila

Background into the revised ART guidelines regarding TLD 1 and TLD 2 and ALD

Dr. Zamazamela Shelembe

2023 ART Clinical Guidelines

2023 ART Clinical Guidelines
for the Management of HIV in Adults, Pregnancy and Breastfeeding, Adolescents, Children, Infants and Neonates
June 2023 Version 4
Republic of South Africa National Department of Health

South African HIV program big challenges including:

- Sub-optimal retention in the **first 12 months**. This also applies to first 12 months for a returning client.
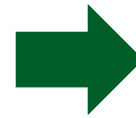
- Sub-optimal **VL suppression** (< 50 copies/mL)

Massive health system burden
High number of people living with HIV and people at risk of acquiring HIV requiring ongoing **HIV treatment and prevention services**

! Critical consideration for this update:
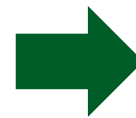
→ Reducing disengagement in the first 12 months on treatment (including after re-engagement)

→ Improving long-term viral load suppression (VLS)

Implementing optimised regimens

An optimized regimen using DTG:

- simplifies regimens with reduced pill burden and dosing frequency
- enhances tolerability
- reduces toxicity
- reduces potential drug-drug interactions
- maintains viral suppression without jeopardizing future treatment options through the development of drug resistance

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Poll Question 1 (Single Selection)

TDF + 3TC + DTG (TLD) is the preferred regimen for Pregnant Women ≥ 30 kg and ≥ 10 years of age

a) **True**

b) **False**

c) **Not Sure**

First-line ART regimens

Dolutegravir (DTG) is the recommended drug in all clients ≥ 4 weeks of age and weigh ≥ 3kg

Benefits of Dolutegravir:

- ✓ Provides rapid viral suppression.
- ✓ High genetic barrier to resistance.
- ✓ Minimal side effects and drug interactions.
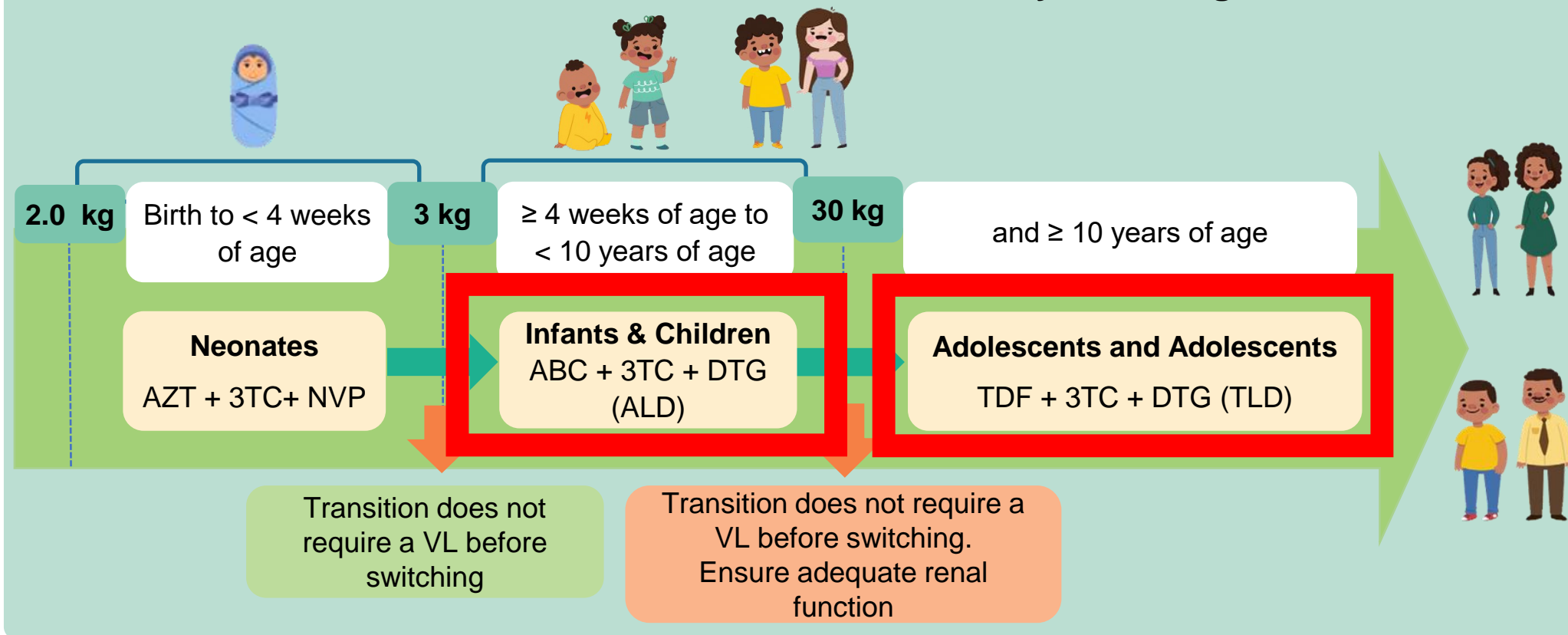- ✓ Well tolerated thus promotes adherence and retention on ART.

Adult and Adolescent Males and Females, including Pregnant Women ≥ 30 kg and ≥ 10 years of age

TDF + 3TC + DTG (TLD)

Neonates, Infants and Children 0 to < 10 years of Age

2.0 kg	Birth to < 4 weeks of age	3 kg	≥ 4 weeks of age to < 10 years of age	30 kg	and ≥ 10 years of age
	Neonates AZT + 3TC+ NVP		**Infants & Children** ABC + 3TC + DTG (ALD)		**Adolescents and Adolescents** TDF + 3TC + DTG (TLD)

Transition does not require a VL before switching

Transition does not require a VL before switching. Ensure adequate renal function

• 2023 ART Clinical Guidelines for the Management of HIV in Adults, Pregnancy and Breastfeeding, Adolescents, Children, Infants and Neonates, page 11.

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Recycling of TDF in second-line regimens

- Nucleosides And Darunavir/Dolutegravir in Africa (NADIA)

- This trial evaluated **options for second-line antiretroviral therapy** in patients failing on a non-nucleoside reverse transcriptase inhibitor (NNRTI) and tenofovir (TDF)-based first-line regimen. The trial aimed to answer the following:

  1. Is a **DTG**-containing regimen as effective as a darunavir-containing **(DRV/r)** regimen in 2nd-line?
  2. Is continuing **TDF and 3TC** in your second-line regimen as effective as using **AZT and 3TC.**

Conclusion:
DTG in combination with NRTIs was as effective as DRV/r
including in those with extensive NRTI resistance in whom
no NRTIs were predicted to have activity.
TDF was superior to AZT as second-line therapy.

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TLD will be used as:

A First-line regimen	A Second-line regimen	Part of Third-line regimens

If TLD is the most optimised regimen we have, and it can be used in 1st, 2nd, and 3rd-line regimens, that means that:

All new clients should be initiated on TLD, or…	Clients already on ART should be on TLD, or…	…be IN THE PROCESS of switching to TLD

Switching clients already on ART

Clients already on ART will also be switched onto optimised regimens containing DTG

- Non VL-dependent switches will be conducted for clients regardless of VL result:

Non VL-dependent regimen switches		
Current Regimen	Regimen if change indicated	
TEE (TDF/3TC/EFV)	**TDF/3TC/DTG (TLD):** a. Age ≥ 10 years AND b. Weight ≥ 30 kg AND c. No renal dysfunction	**ABC/3TC/DTG (ALD)** a. Age <10 years OR b. weight < 30 kg OR c. Abnormal renal dysfunction
AZT or ABC/3TC/ EFV (or NVP)		
AZT/3TC/DTG		
Any LPV/r/ or ATV/r regimen **less than 2 years**		

(between the two regimen-change columns: **OR**)

- VL-dependent switches will be conducted for clients according to their VL result:

VL-dependent regimen switches
All clients on LPV/r or ATV/r regimen for **more than 2 years** may also be switched after careful evaluation

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A paradigm shift

In the new ART era of dolutegravir, TLD (or ALD) will be used as a

| First-line regimen | Second-line regimen | Part of Third-line regimens |

→ need to rethink our terminology related to "1st and 2nd-line"

TLD 1 (or ALD 1) — Clients on a DTG-containing regimen, who **have never failed** a previous regimen (old "1st -line" terminology)

TLD 2 (or ALD 2) — Clients on a DTG-containing regimen, who **have failed** a previous regimen (old "2nd -line" terminology)

- 2023 ART Clinical Guidelines for the Management of HIV in Adults, Pregnancy and Breastfeeding, Adolescents, Children, Infants and Neonates, page 2.

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Clinical Stationery

Clinical stationary part 1: TLD 1

- Visit summary data must be captured from the clinical stationary as recorded by the clinician
- Example below is for the capturing of TLD 1

You will need to capture ART regimen from clinical stationary as noted below:
- Drug names will be written out under ARV1/2 and 3
- Regimen number in brackets

Patient Treatment Detail - Month 0 (Aug 2023)

Details | Audit History

Visit Details

Visit Date	Health Provider	DMOC	Clear
08 Aug 2023	Nurse		

Pregnant	TB Screening	On TPT?
	Asymptomatic	No

ARV's Prescribed

	NRTI 1	NRTI 2	NNRTI/PI/INSTI		Other:
First Line Regimen	TDF	3TC	EFV	DRV	Additional Drug
Second Line Regimen	d4T	FTC	NVP	RAL	
Salvage / 3rd Line	AZT	ddI	LPV/r	ETR	Old Coding
Stopped	ABC		RTV	DTG	
			ATV		**1T3O**

Months ART prescribed
1 Month
☐ Restarted ART this month (>3 month interruption)

Test Results

📄 New 📝 Edit ✖ Delete

	Result Type	Result	Result Value	Result Percentage

Other
Next Clinical Appointment Date
05 Sep 2023   Clear

Next Visit At   ● Facility   ○ Adherence club

Save   Delete All   Close

Medication, incl. ARVs prophylaxis

Adherence & Counselling		OUT ▼	
ARV1	**TDF 300 mg**		
ARV2	3TC 300 mg **TLD (1)**		
ARV3	**DTG 50mg**		
ARV4 or other			
ARV5 or other			
ARV6 or other			
Cotrimoxazole			
IPT			
Fluconazole			

Clinical stationary part 2: ALD 1

- Visit summary data must be captured from the clinical stationary as recorded by the clinician
- Example below is for the capturing of ALD 1

You will need to capture ART regimen from clinical stationary as noted below:
- Drug names will be written out under ARV1/2 and 3
- Regimen number in brackets

Adherence & Counselling		OUT ▼	℞
ARV1	ABC 600 mg		
ARV2	3TC 300 mg — ALD (1)		
ARV3	DTG 50mg		
ARV4 or other			
ARV5 or other			
ARV6 or other			
Cotrimoxazole			
IPT			
Fluconazole			

Patient Treatment Detail - Month 11 (Mar 2023)

Details | Audit History

Visit Details

Visit Date: 07 Mar 2023 | Health Provider: Nurse | DMOC: | Clear

Pregnant: | TB Screening: Asymptomatic | On TPT?: No

ARV's Prescribed

	NRTI 1	NRTI 2	NNRTI/PI/INSTI		Other:
First Line Regimen	TDF	3TC	EFV	DRV	Additional Drug
Second Line Regimen	d4T	FTC	NVP	RAL	
Salvage / 3rd Line	AZT	ddI	LPV/r	ETR	Old Coding
Stopped	ABC		RTV	DTG	
			ATV		1A3O

Months ART prescribed: 1 Month

☐ Restarted ART this month (>3 month interruption)

Test Results
New | Edit | Delete

Result Type	Result	Result Value	Result Percentage

Other
Next Clinical Appointment Date: 07 Apr 2023 | Clear

Next Visit At: ● Facility ○ Adherence club

Save | Delete All | Close

Clinical stationary part 3: Additional DTG

Additional DTG is added for clients on:
- TB treatment
- Anticonvulsants: Carbamazepine, Phenobarbital and Phenytoin

You will need to capture ART regimen from clinical stationary as noted below:
- Drug names will be written out under ARV1/2 and 3
- Drug 4 as the additional drug
- Regimen number in brackets

Adherence & Counselling		OUT ▼	
ARV1	TDF 300 mg		
ARV2	3TC 300 mg — TLD (1)		
ARV3	DTG 50mg		
ARV4 or other	DTG 50mg		
ARV5 or other			
ARV6 or other			
Cotrimoxazole			
IPT			
Fluconazole			

Patient Treatment Detail - Month 6 (Jul 2023)

Details | Audit History

Visit Details

Visit Date: 03 Jul 2023
Health Provider: Nurse
DMOC: __ _Clear_

Pregnant: __ | TB Screening: Asymptomatic | On TPT?: No

ARV's Prescribed

	NRTI 1	NRTI 2	NNRTI/PI/INSTI		Other:
First Line Regimen	TDF	3TC	EFV	DRV	Additional Drug: DTG
Second Line Regimen	d4T	FTC	NVP	RAL	Old Coding
Salvage / 3rd Line	AZT	ddI	LPV/r	ETR	
Stopped	ABC		RTV	DTG	
			ATV		1T3OO

Months ART prescribed: 1 Month

☐ Restarted ART this month (>3 month interruption)

Test Results

New | Edit | Delete

Result Type	Result	Result Value	Result Percentage

Other

Next Clinical Appointment Date: 31 Jul 2023 _Clear_

Next Visit At: ⦿ Facility ○ Adherence club

Save | Delete All | Close

TLD 2 and ALD Capturing

Mr Matthew Chetty

TLD 1/TLD 2 Capturing TIER.Net

- How to Capture new Clients
- How to Capture Clients that have transitioned to TLD 1/TLD 2

How to capture a <u>new</u> Client on TLD 1 regimen for Adults and Adolescent

Step 1 Patient Look-Up

- Click New – Enter Folder Number and search
- This is to prevent duplication

- Step 2 Adding a New Patient

- Once Search yields "No Match" – Proceed to Add New

- Enter Client Information as per clinical chart and Click Save
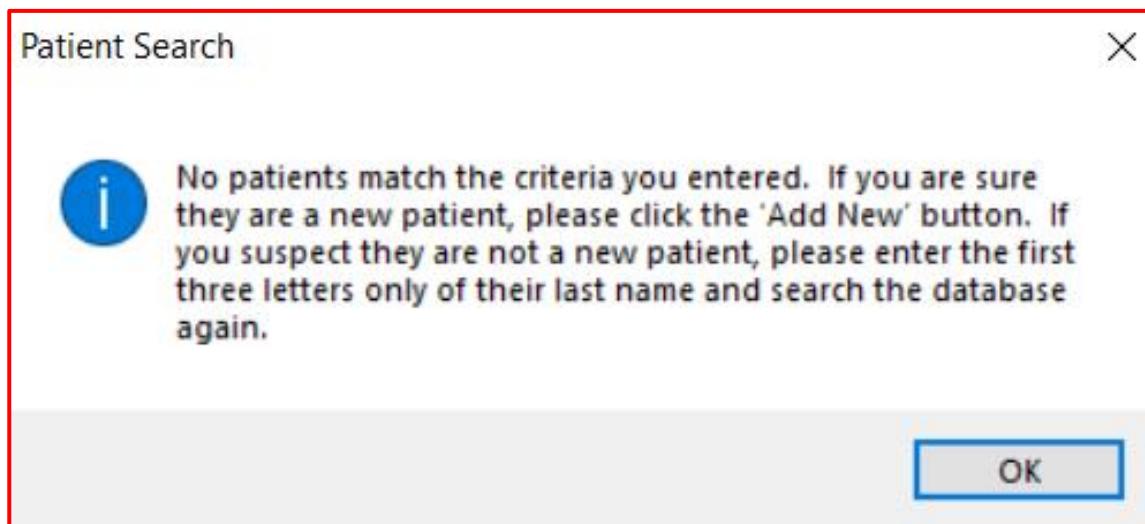
How to capture a _new_ Client on TLD 1 regimen for Adults and Adolescent

Step 3 Adding regimen

• Enter Clinical Information

• ARV's Prescribed = TDF + 3TC + DTG

• Clients (≥10 years and ≥30kg) that start treatment and given TLD1 (never failed a regimen)

• Code Combination = 1T30

How to capture a new Client on ALD 1 regimen for Paeds (<10 years or < 30kg)

Step 1 Patient Look-Up

Step 2 Adding a New Patient

Step 3 Adding regimen -Enter Clinical Information

- ARV's Prescribed = ABC + 3TC + DTG
- Clients(<10 years &/or <30kg) that start treatment and given ALD1 (never failed a regimen)
- Code Combination = 1A3O

Existing Clients switching to TLD 1:
Adults and Adolescent

- Step 1 Patient Look-Up
- Step 2 Select Correct Client
- Step 3 Go into patient record
- Step 4 Select Visit Date
- Step 5 Capture transition has advised and captured on a clinical chart by a clinician (ARV's Prescribed = TDF + 3TC + DTG)
- Code Combination = 1T30

Existing Clients Switching to ALD 1: Paeds (<10 years or < 30kg)

- Step 1 Patient Look-Up
- Step 2 Select Correct Client
- Step 3 Go into patient record
- Step 4 Select Visit Date
- Step 5 Capture transition has advised and captured on a clinical chart by a clinician (ARV's Prescribed = ABC + 3TC + DTG)
- Code Combination = 1A3O

Switching to TLD 2: Adults & Adolescent

Clients on a DTG-containing regimen, who <mark>have failed</mark> an earlier regimen (previous "second-line" terminology)

- Step 1 Patient Look-Up

- Step 2 Select Correct Client

- Step 3 Go into patient record

- Step 4 Select Visit Date

- Step 5 Capture transition has advised and captured on a clinical chart by a clinician (ARV's Prescribed = TDF + 3TC + DTG)

- Code Combination = 2T3O

Clients on a DTG-containing regimen, who <mark>have failed</mark> an earlier regimen (previous "second-line" terminology)

- Step 1 Patient Look-Up

- Step 2 Select Correct Client

- Step 3 Go into patient record

- Step 4 Select Visit Date

- Step 5 Capture transition has advised and captured on a clinical chart by a clinician (ARV's Prescribed = ABC + 3TC + DTG)

- <mark>Code Combination = 2A3O</mark>

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Data for Reporting

- Clients transition to TLD
- TROA on TLD

NEW HIV+ ON TLD

- Filter from the front end of TIER.Net, Select ART Start date for the week/period in question

- Filter Last ART Visit Code and select 1T3O, (Filter 1TFO, 2TFO and 2T3O then pull files with these regimens and review with clinicians, as possible 1T3O)

HIV Registrations On Record   Showing 1 – 4 of 4

New | Edit | Delete | Search | Filter | Setup Columns | Sort By: Last HTS HIV Test Result ▾ Desc ▾

	ART start date	Last HTS HIV Test Date	Last ART Visit Code	Last HTS HIV Test Result	Current Age	Gender	Outcome	PrEP Status
▶	2022/06/06 - 2022/06/10		1T3O ▾	▾		▾	▾	▾

Apply Filter | Reset | Help

	ART start date	Last HTS HIV Test Date	Last ART Visit Code	Last HTS HIV Test Result	Current Age	Gender	Outcome	PrEP Status
▶ 1	06 Jun 2022	06 Jun 2022	1T3O	Positive (Reactive)	31	Male	None	
2	07 Jun 2022	07 Jun 2022	1T3O	Positive (Reactive)	31	Male	None	
3	06 Jun 2022	06 Jun 2022	1T3O	Positive (Reactive)	35	Female	None	
4	08 Jun 2022		1T3O		26	Male	None	

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TROA on TLD

- Filter from the front end of TIER. Net
- Select ART LAST VISIT CODE 1T3O/2T3O
- Sort Outcome Column ASC-This will allow records with No outcomes to be displayed first
- Count the total records (Excluding an HIV Outcome)

HIV Registrations On Record Showing 1 – 20 of 20

New | Edit | Delete | Search | Filter | Setup Columns | Sort By: Outcome | Asc

	ART start date	Last HTS HIV Test Date	Last ART Visit Code	Last HTS HIV Test Result	Current Age	Gender	PrEP Status	Outcome
	2022/05/01 - 2022/06/10		1T3O					
1	17 May 2022	17 May 2022	1T3O	Positive (Reactive)	50	Male	None	
2	01 Jun 2022	01 Jun 2022	1T3O	Positive (Reactive)	17	Female	None	
3	04 May 2022	04 May 2022	1T3O	Positive (Reactive)	20	Female	None	
4	03 May 2022	03 May 2022	1T3O	Positive (Reactive)	22	Male	None	
5	17 May 2022	17 May 2022	1T3O	Positive (Reactive)	27	Female	None	
6	18 May 2022	18 May 2022	1T3O	Positive (Reactive)	37	Female	None	
7	03 Jun 2022	03 Jun 2022	1T3O	Positive (Reactive)	27	Female	None	
8	30 May 2022	30 May 2022	1T3O	Positive (Reactive)	35	Female	None	
9	06 Jun 2022	06 Jun 2022	1T3O	Positive (Reactive)	31	Male	None	
10	04 May 2022	04 May 2022	1T3O	Positive (Reactive)	19	Female	None	
11	23 May 2022	23 May 2022	1T3O	Positive (Reactive)	19	Male	None	
12	10 May 2022	10 May 2022	1T3O	Positive (Reactive)	22	Female	None	
13	07 Jun 2022	07 Jun 2022	1T3O	Positive (Reactive)	31	Male	None	
14	08 Jun 2022		1T3O		26	Male	None	
15	12 May 2022	12 May 2022	1T3O	Positive (Reactive)	28	Female	None	
16	25 May 2022	23 May 2022	1T3O	Positive (Reactive)	45	Male	None	
17	17 May 2022	17 May 2022	1T3O	Positive (Reactive)	29	Female	None	
18	30 May 2022	30 May 2022	1T3O	Positive (Reactive)	16	Female	None	
19	06 Jun 2022	06 Jun 2022	1T3O	Positive (Reactive)	35	Female	None	
20	11 May 2022	11 May 2022	1T3O	Positive (Reactive)	30	Female	None	TFO

Background into the revised ART guidelines regarding VLD monitoring revisions

Dr. Zamazamela Shelembe

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After ART initiation the 1st VL test will be done after 6 months on ART?

a) True

b) **False**

c) Not Sure

Routine VL monitoring schedule on ART

Dispensing cycle (DC)

- Number of days for which a client would have treatment if a single standard "monthly" quantity of tablets were dispensed.

- The term DC is preferred to the previously used term 'month' due to the potential discrepancy that may arise between the days of treatment dispensed (if 28-day pack sizes are used) and the days in a month (on average, 30 days).
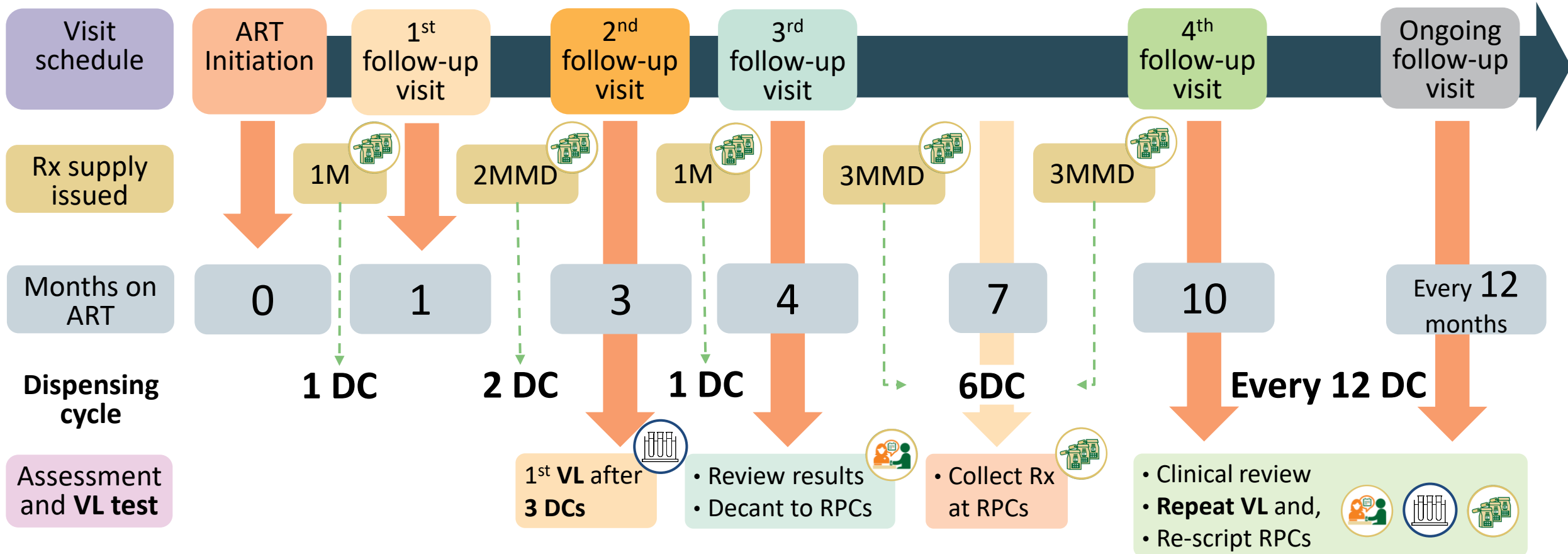
Tablet pack size	DC
28 tablet or 30 tablet packs	➡ 1 DC
90 tablets	➡ 3 DC

VL monitoring schedule		Intervention	TIER.net Cohort
1st VL		**After** 3 DCs	6-month VL completion cohort
Clients who remain virally suppressed	2nd routine VL	**From** 10 DCs aligned with clients scripting cycle	12-month VL completion cohort
	3rd routine VL	**From** 22 DCs aligned with clients scripting cycle	24-month VL completion cohort
	4th and subsequent VLs	VLs will be taken at intervals of 12 DCs intervals	36-month VL completion and ongoing

- 2023 ART Clinical Guidelines for the Management of HIV in Adults, Pregnancy and Breastfeeding, Adolescents, Children, Infants and Neonates, page 20.

Timing of DCs and VL monitoring

Visit schedule	ART Initiation	1st follow-up visit	2nd follow-up visit	3rd follow-up visit		4th follow-up visit	Ongoing follow-up visit
Rx supply issued		1M	2MMD	1M	3MMD	3MMD	
Months on ART	0	1	3	4	7	10	Every 12 months
Dispensing cycle		1 DC	2 DC	1 DC	6DC		Every 12 DC
Assessment and VL test			1st **VL** after **3 DCs**	• Review results • Decant to RPCs	• Collect Rx at RPCs	• Clinical review • **Repeat VL** and, • Re-script RPCs	

TIER.Net "Grace" period
VL done from 60 up to 270 days on ART will be included in the 6-month cohort

TIER.Net "Grace" period
VL done from 271 up to 540 days on ART will be included in the 12-month cohort

- Rx = Treatment
- M = Month
- MMD = Multi-Month Dispensed
- DC = Dispensing cycle

VLD capturing in various cohorts

Mr Matthew Chetty

Management of Viral Loads Results

- TIER.Net and allocation of results in ART cohort report TIER.Net
- Caveats to the Viral Load results management rules in TIER.Net

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Illustration of inclusion and exclusion criteria for Viral Load management in TIER.Net and allocation of results in ART cohort report

Legend

☐ **Milestone:** Routine Viral load monitoring test required in line with SA National ART guidelines

Grace period: Threshold rules allocate laboratory tests entered to the respective duration in ART
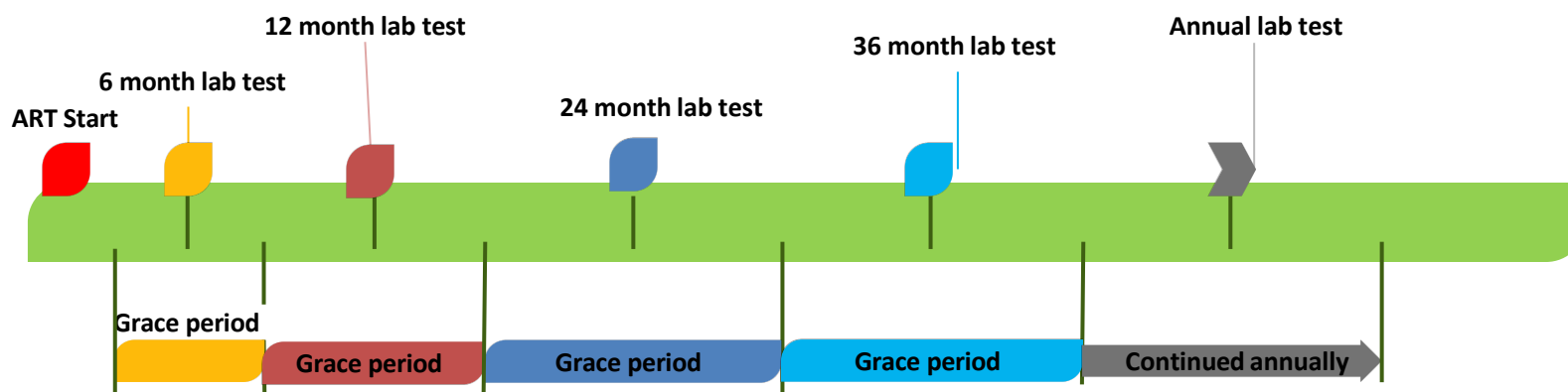
Grace periods to the rules:
- (3-9months = 6VL), +/- 3 months for 6 months bloods
- (10-21months = 12 VL), - 2 months to + 9 months for 12 months bloods
- (22-31 months = 24 VL), - 2 months to +7 months for annual bloods

Note: The rules in TIER.Net summarize data in alignment with the routine laboratory tests as outlined in the National treatment guidelines. The rules in TIER.Net will allocate laboratory results entered in line with the durations and corresponding grace periods listed above. **No data will be excluded from the reports (except where a result is entered between 0 – <3 months from ART start).**

Caveats to the Viral Load results management rules in TIER.Net

Caveats to the rules in TIER.Net:

- **Caveat 1:**

  If a person is <mark>not on drugs (uLTF)</mark> when the annual safety bloods are captured, then their bloods will be excluded.

  This can be for 2 different reasons:

  1. **Data quality/completeness**: if no visit is recorded (i.e., no regimen data) but a laboratory test is captured, the lab test will be excluded from the data as there is no corresponding visit to link to the requested test.
     - **Reminder:** the denominator for <mark>VLD is FLR+SLR.</mark>

     Thus, if no regimen is recorded then the laboratory result is excluded but this would also be excluded from the denominator. Data quality and completeness should be verified to ensure patient visits are captured.

  2. **Clinical management:** Where a patient might be stopped treatment for clinical management reasons (i.e., this might happen if someone had hyperlactatameia and therefore had to stop drugs for their blood to normalise). This would be recorded as a patient visit with a 'stop' recorded and zero drugs issued. This too is excluded from the data collation.
     - **NB:** Results are to be captured under the **visit** the bloods were drawn and not the date they were returned to the facility or the date they were filed.

  <mark>[Interpretation: if a regimen is not captured but a blood result is captured in the corresponding visit the blood result won't be included in the summary. Important to ascertain if this is a clinical management or data quality/completeness issue.]</mark>

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Caveats to the Viral Load results management rules in TIER.Net

Caveats to the rules in TIER.Net:

- **Caveat 2:**
  - A patient with an <mark>outcome</mark> during the cohort summary duration being reported will be excluded from the summary data. Data is only reported on patients who are active on ART.
  - e.g., reporting for 24 months, those patients with a viral load captured and an outcome between 12 and 24 months will be excluded from the data collation. But, again, the patient would not be included in the denominator so this would not affect the VLD data.

  <mark>[Interpretation: laboratory results are excluded where a patient has an outcome. Thus, this does not affect the data completeness due to the denominator definition for VLD which is FLR + SLR.]</mark>

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Caveats to the Viral Load results management rules in TIER.Net

Caveats to the rules in TIER.Net:

- **Caveat 3:**
  - Only one laboratory result per reporting duration is included. If more than one viral load or CD4 count is captured within the same duration (and grace period) only the latest result captured is included in the collated data per reporting duration.

  [Interpretation: only 1 test is counted per person, per reporting duration. Any additional tests done and entered for patient management and monitoring purposes are important but aren't included in the summarized data]

Note: The rules in TIER.Net summarize data aligned to the National treatment guidelines and are not meant to prescribe patient management. TIER.Net collates the data that is captured to assist with program monitoring.

Management of Viral Load in TIER.Net

- Viral Load Journey
- TIER.Net Guidance
- VL Results in TIER.Net
- TIER.Net VL Capturing

Viral load journey: making it to the Quarterly Reports...


```
Patient comes to clinic on appt day
        │
Clinician requests bloods on stationery
        │
Pt goes to blood room
        │
NHLS form completed and blood drawn
        │
Results sorted
        │
NHLS sends results to facility
        │
NHLS processes blood
        │
Bloods sent to NHLS
        │
Pts w abnormal results recalled
        │
Blood filed in folder
        │
Patient comes for clinical visit and reading of results
        │
Sister documents results on ART stationery
        │
Improved patient outcomes
        │
Report data analyzed; clinical care/resource allocation
        │
Quarterly reports generated
        │
Results captured into TIER.Net (dc initials beside blood result)
```

The diagram on the previous screen illustrates the journey of the laboratory request and results

- The **red blocks highlight** the key points where the VL might not be done or not captured, though all blocks are places where the results might drop off (i.e., not happen).

- This also illustrates the integrated role everyone plays to ensure the results are returned to the patient file and captured into TIER.Net.
  - If the laboratory request is done (sticker in the clinical stationery), but the result is not filed in the patient file, the clinician does not have the information to effectively manage the patient.
  - If the result is not captured in the stationery the data capturer cannot capture the result. This results in low proportions of VLD. And unreliable VLS.
- The implication of not filing the results is we are not effectively managing our patients, but we are also spending a lot of money on laboratory tests that aren't being acted on!
- Additionally – results **NOT** captured into TIER.Net are not included in the push button management reports.
- Refer to ART M&E SOP for further guidance.

TIER.Net Guidance

Management of normal and abnormal laboratory results in TIER.Net guidance

This revised guidance includes step by step instruction for all activities relating to NHLS laboratory results as conducted by both the clinician and the administrative clerk (AC); including the requesting of laboratory tests, the triaging of results, recall of patients (if required), the capturing of results and recall intervention into TIER.Net, and the filing of the results in the patient folder.

Requesting diagnostic tests:

1. During the clinician consultation, the Clinician to indicate in the clinical stationery the requested tests.

   1.1. HIV/ART clinical stationery: Indicate the type of specimen requested in the visit column of the ART clinical visit summary corresponding to the clinical visit date.

   1.2. TB clinical stationery: Indicate in the laboratory tests and diagnostics section, or in the TB ID register the type of test requested.

Note: If the test is requested by one clinician but referred to another for completion of the test, then the clinician conducting the specimen collection, will need to complete section 2 and 3 below.

2. Clinician, who is conducting the test, to complete the NHLS Laboratory request form.

   2.1. Place the barcoded lab specimen number sticker from the corresponding NHLS form on each specimen tube/jar and in the clinical stationery or TB ID register next to the requested test.

3. Clinician to record results from point of care (POC) instruments in the clinical stationery, indicating the type of test, the result, date, and document using 'POC' to indicate that the test was conducted using a POC machine.

Data clerks get this information from clinical stationery

FIGURE 1. TEST REQUEST CAPTURING IN TIER.NET

Capturing of requested tests:

1. AC (using the patient folders and TB Identification register) to capture **requested** lab tests into TIER.Net.

    1.1. Open patient record, and in TIER.Net, capture the test requested against the corresponding visit.

Management of laboratory test results:

Note: All results (normal and abnormal) must be captured into the TB/HIV information system on the same day they are triaged by the clinician.

Triaging of Results:

1. Clinician to triage *all* test results as soon as they are received (via NHLS hard copy or SMS printer).

2. Document *all* TB case finding results in the TB ID register, irrespective of result.

3. Return *all* triaged results to the admin clerk.

    3.1 Clinician to request patient folder from the admin clerk for *all* abnormal results received.

        3.1.1 Once folders are received; clinician to review and document intervention in clinical stationery.

        3.1.2 Clinician to open TB blue card for all TB positive patients.

TIER.Net VL Capturing

When a clinician requests a viral load, as indicated in the clinical stationery, click on the New button in the Test Results grid

This will open the Test Details window. The test date will automatically be populated with the visit date.

Select the Test type. - Enter the Lab reference number if available.
Click on Save to save the test request

Once the visit has been saved, the next time the user opens the patient record, the visit dates where the tests were requested will appear in **bright orange**. This indicates that there are blood results against this visit that have not been captured

Bulk capturing of returned (normal) results

- Once results have been returned, and triaged by a clinician, all NORMAL and INITIALLED results can be captured in bulk

- Under **Tools** click 'Tests Awaiting Results' (renamed from 'pending tests')

TIER.Net

| File | Setup | Analysis | Tools | View | Window | Help |

Country Details

SOUTH AFRICA

Tools menu:
- Setup Station
- Options
- Load Maintenance File
- Index All Patients
- Tests Awaiting Results
- Bulk Adherence Club Visit Capturing
- Duplicate Facility Folder Merge
- Move Facility Data
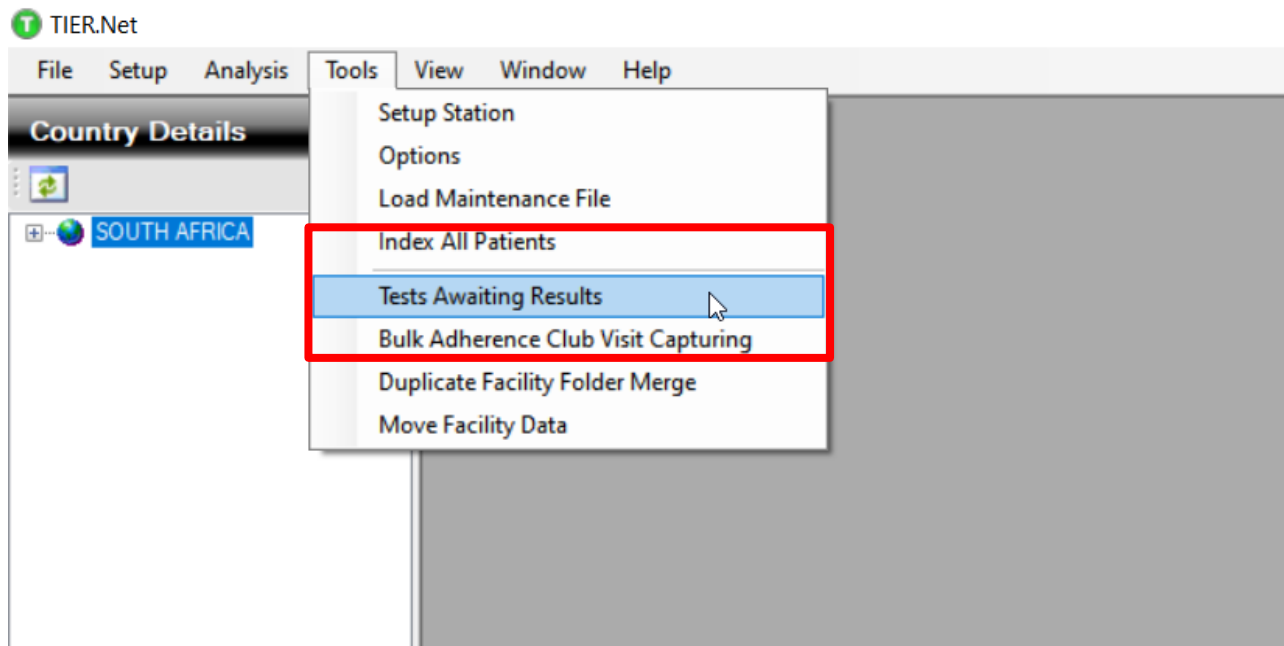
- Bulk capturing functionality was designed to drive efficiency (speeds up capturing)
- Not universally utilised in facilities
  - Missed opportunity to alleviate the AC workload
- Clinicians MUST document test in clinical stationery (affix sticker) – Good Clinical Practice
- Tests MUST BE captured
  - Non-capturing of tests limits usefulness of bulk capturing

Critical prescriptions - all laboratory results must be triaged by a clinician on same day that results arrive

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Bulk capturing of returned (normal) results (2)

- Search by folder number, or by lab reference number

- Or, click on headings to sort any column

- Double-click to open the patient record

Tests awaiting results

Search

☉ Folder number   ○ Lab reference   Number of records: 39

Folder number	Name	Surname	Test type	Test date	Lab reference
890909ZUL	ZOE	ZULU	GeneXpert	31 Aug 2018	AKK01152
FOLDER_100728	Xandra	Guthrie	VL	21 Aug 2018	ABPJ0299P
FOLDER_100728	Xandra	Guthrie	CD4	21 Aug 2018	ABPJ0299P
FOLDER_100126	Medge	Howe	CD4	08 Aug 2018	ABOP4832P
FOLDER_100126	Medge	Howe	VL	08 Aug 2018	ABOP4832P
FOLDER_100161	Scarlet	Harrison	CD4	08 Aug 2018	ABOP4825P
FOLDER_100161	Scarlet	Harrison	VL	08 Aug 2018	ABOP4825P
FOLDER_100399	Maia	Gilliam	VL	08 Aug 2018	ABOP4829P
FOLDER_100450	Kelsey	Foreman	VL	08 Aug 2018	ABOP4826P
FOLDER_1001101	Giselle	Joyner	VL	08 Aug 2018	ABOP4827P
FOLDER_1001229	Vielka	Rivera	VL	08 Aug 2018	ABOP4820P
FOLDER_1001257	Sonya	Frye	VL	08 Aug 2018	ABOP4823P

Close

Test results capturing window (1)

- Bulk capture is 'short cut' to test results capturing window
- Tick '**Result returned**' to activate box for 'Test result'

Test results capturing window (2)

For VLs, button for LDL auto populates test result with 19

Common error: capturing test result in box for lab reference number

Our reports can be a reflection of how well the system is functioning?

Therefore, it is essential the quality of the data is good in order to adequately interrogate the program.

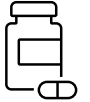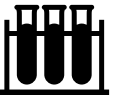1.Which Option below will allow you to access the Data Validation List ? *Ans. Analysis*

    A. Setup
    B. Tools
    C. View
    D. Analysis

2.What List can be used to Identify clients who may need to be switched to 2nd line or who need another viral load? *Ans. Two Consecutive Unsuppressed Viral Load List*

    A. Viral Load Overdue List
    B. Monthly Report
    C. Facility Management Report

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Conclusion

New terminology	Clinical changes	Impact on TIER.net	Data Capturer's role
TLD/ALD 1 →	DTG-containing regimen, who have never failed any other regimen **(previous "first-line")**	Capture ART regimen as **"First-Line Regimen"**	✓ Ensure that the regimen number and 3 ARV drugs (with additional drugs if indicated) are captured correctly
TLD/ALD 2 →	DTG-containing regimen, who have failed an earlier regimen **(previous "second-line")**	Capture ART regimen as **"Second-Line Regimen"**	
VL monitoring according to dispensing cycles (DCs)	• 1st VL <u>after</u> 3 DCs: → **6-month cohort** • 2nd routine VL <u>from</u> 10 DCs: → **12-month cohort** • 3rd and subsequent routine VLs <u>from</u> 22 DCs in intervals of 12 DCs thereafter: → **24-month, 36-month cohort etc**	VL cohorts will remain unchanged	✓ Ensure all VL results are captured

Thank you for your time

Questions / Comments