

Direct Assistance Facility B

**Viral Load Results Interpretation and Patient
Management**

Team Members

Responsibility	Team member
Champion/sponsor	
Team leader	
QI expert/coach	
Data Manager	
Frontline Members	
Other team members	

Facility Background

A faith based organization established in 1997

- We serve a vulnerable population of close to 500,000 persons.
- We are a Level 3 facility with a work force of 82 local staff , 5 foreign staff and 50 CHV's

Previous improvement efforts: Integration of MCH

Our HIV burden

- # on ART: 2779
- Number of VL tests 300/month
- Suppression rates- 94.5

Community needs

- Uptake of family planning
- Comprehensive Maternity Services

Stakeholder Analysis

Name	Level of Support					Key Interests / Issues	Assessment of Impact (H, M or L)	Action Items / Strategy to Influence	Key Communication Points
	R	SK	N	SP	E				
					E	Funds and policies	H	Funds	Through presentations & narrative reports
			N			Policies	H	Policies	Reports
					E	Funds and technical assistance	H	Funds and TA	Project progress and emails
Patients					E	Health services	H	Clinic attendance	Logs and calls
Staff					E	Development and implementation of SOP's and guidelines	H	Implementation of SOP and guidelines	CME and reports
NHRL					E	Timely feedback of results	H	Feedback	Emails and portal log in
Community			N			Collaboration and being part of the team	M	Disseminating information	Meetings
Safecare				SP		Quality improvement	M	Assessment	reports
Suppliers				SP		Ensuring that commodities are available	H	Timely supply of commodities	Calls and emails
Safety tech				SP		Infection prevention and waste management	H	Waste management	Physical collection of waste
R = Resistant, SK = Skeptical, N = Neutral, SP = Supportive, E = Enthusiastic							H = High M = Moderate L = Low		

The Story of Our Project

The Story of Our Project

Before

- Upon receiving results:
 - Poor communication of results from lab.
 - Clinicians giving longer appointments (ranging between 30- 90 days).
 - There would sometimes be no communication between clinician's and adherence team, hence patients would miss EAC, there was no timeline for SI to update the results in the EMR.

After

- Improved communication process.
 - Upon receiving results, the lab personnel prints in three copies and shares one copy with SI, the other with adherence then flags the High VL results and share with viremia clinic lead. Lab updates the VL log, SI updates EMR and adherence updates the EAC register.
 - Adherence lead calls all HVL patients immediately.
 - Viremia clinic lead updates viremia register and confirms the same (HVL line list) with adherence lead.
 - When patient reports to the clinic the adherence team and clinician informs him/her of their results and what it means, and EAC is commenced.
 - For those whose phones go unanswered physical tracing is done.

Project Summary

What are we trying to accomplish?	How will we know if a change is an improvement?	What change will we make that will result in an improvement?
<p>Overarching Goal</p> <p>Patients with high VL attending EAC timely .</p>	<p>AIM Statement</p> <p>Decrease percentage of patients with high VL not attending EAC within 30 days of receiving results from 47.7%, to 10% by March 2019.</p> <p>Metric</p> $\frac{\text{\# of patients with HVL not attending EAC within 30 days of receiving results}}{\text{Total \# of patients with HVL results}} * 100$	<p>Intervention</p> <p>Restructure the patient notification process</p> <ol style="list-style-type: none"> 1. Shorten TCA to within 30 days for all VL patients 2. Call patients same day upon receipt of HVL results, and physical tracing for those whose phone calls don't go through after three attempts in a week.

Elevator Speech

This project is about

Improving follow up of patients with HVL not attending EAC within 30 days

As a result of these efforts, We will achieve timely attendance of EAC for clients with HVL

It's important because we are concerned about:

❖ Patients with HVL missing timely EAC will impact on our suppression rate

Success will be measured by showing improvement in:

❖ % of patients with HVL attending EAC within 30 days

What we need from you –

❖ We would like to cascade lessons learnt to include other departments i.e. our TB program and your collaboration and ownership of the process to make part of our QI activity.

Process Mapping

The First Step Towards Improvement



Process Step	What Happens?	Who is responsible?	Duration	Forms/logs	Opportunity for Improvement
Clinicians booking the client according country guidelines	Book in the EMR	Clinicians	Continuous	EMR	Reduced missed opportunities
Patients show up for viral load	They are grouped, confirmed for VL booking and escorted to the lab	Triage staff	1 hour	Viral load request form, viral load diary	Enter the MFL code with client ID in the order forms
Sample collection and processing	Samples processed and store in the freezer for a week then shipped after remote log in with sample manifest	Lab team	3 hours	Viral load shipment log and Viral load request forms	

Process Step	What Happens?	Who is responsible?	Duration	Forms/logs	Opportunity for Improvement
Sample transport	Sample transported to NHRL every Monday	Designated driver	30 minutes	Viral load request form Shipment manifest form	Sample collection twice per week
Viral Load testing	Sample verified and tested	NHRL lab technologists	10 working days	Shipment form Receiving log Results dispatch log	Communicate the reason for no results and delayed results.
Result feedback and patient management	Lab receives results verifies and flags high viral loads. Communicates to the adherence team, update results in the viral load tracking log.	Lab in charge and adherence nurse and clinician	30 minutes	high viral load register. Batch summary forms, viral load tracking log, EAC register	Improve lims server availability Patients getting results within 30 days.

Process Mapping

The First Step Towards Improvement

(Show your process table. Provide sufficient detail of the entire process. Highlight the area/s for improvement.)

Process Step	What Happens?	Who is responsible?	Duration	Forms/logs	Opportunity for Improvement
Result feedback and patient management	Upon receiving HVL results the adherence team makes entries of the results in EAC register and shares the same list with Viremia clinic focal lead, then make calls to inform patients of their results and the need to visit the clinic as soon as possible for EAC to be initiated. It was noted that this was not happening as many clients had enough refills and so no need of visiting the clinic hence the need to shorten TCA, and develop an SOP for calling patients back for EAC	Adherence team lead	Within the day of results receipt	EAC register, Viremia register	Information relaying to improve



- **Gap (Problem Statement):**

“Patients with high VL not attending EAC timely, within 30 days”.



- **Voice of Customer (VOC)**
- Who is your customer?
 - Our customers were Patients on ART
 - Yes the right customers were selected
- Tool used to collect the VOC
 - We used a Questionnaire
- Collection Process
 - sample size was 146
 - Distributed within a period of 30 days.
 - Filled questionnaires dropped by individual patient anonymously at a designated box at the reception
- Results (Display)
- **What did you learn? How did you apply what you learned in your intervention?**

QUESTIONNAIRE OF VOICE OF CUSTOMER

Unaonaje Huduma Zetu Ki jumla

Mbaya sana
 Mbaya
 Nzuri ✓
 Nzuri sana
 bora

Ni sehemu gani ya huduma inachukua muda wako sana

Kwa meza ✓
 Kwa pressure/Nurse
 Kwa daktari
 Kwa laboratory
 Kwa dawa

Unajua umuhimu wa kupima kiwango cha virusi mwillini?

Ndio ✓
 Hapana

Ungependelea wakati wa kutolewa damu ya kupima kiwango cha virusi iwe wakati gani?

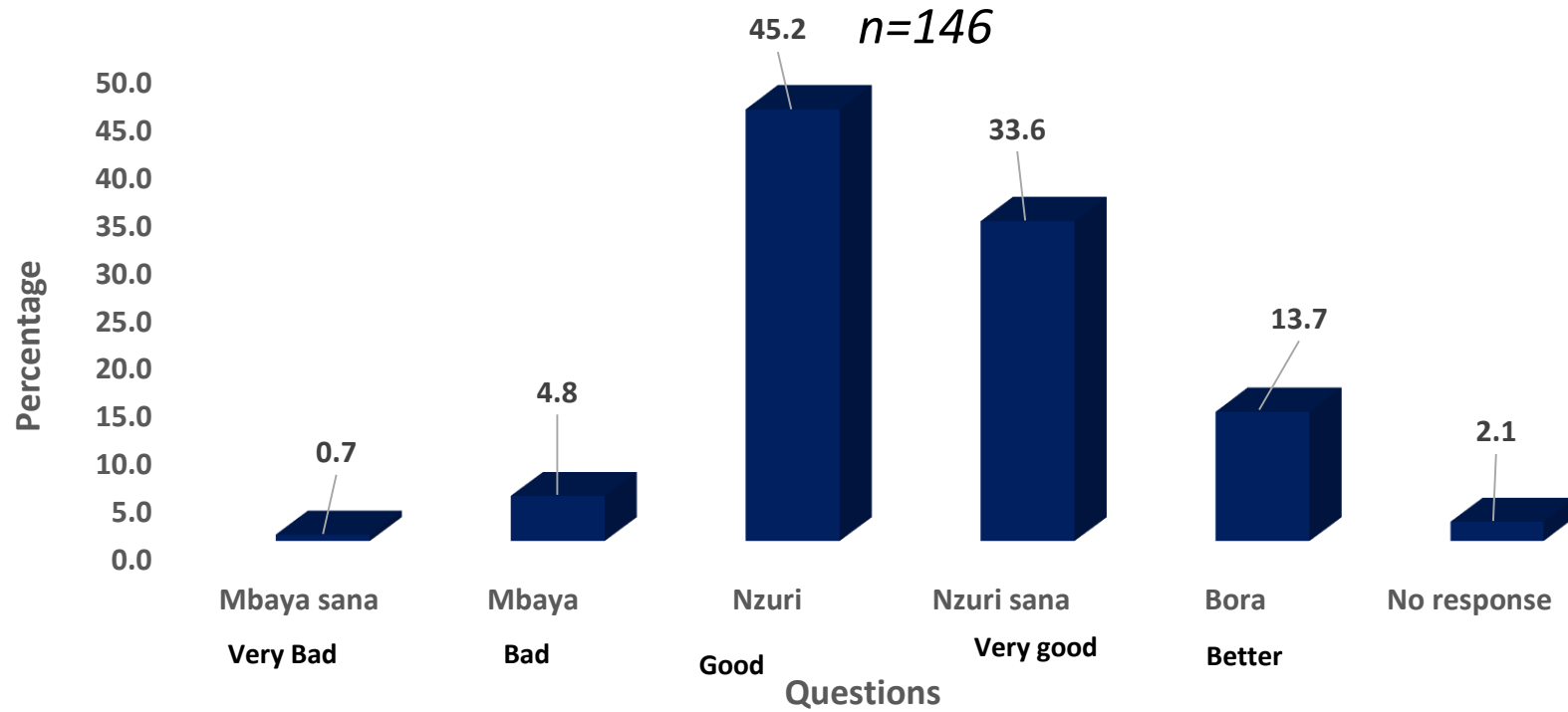
Saa mbili asubuhi ✓
 Saa nane

Ni wapi ungependa turekebishe? *KWA MEZA*



- Results (Display)

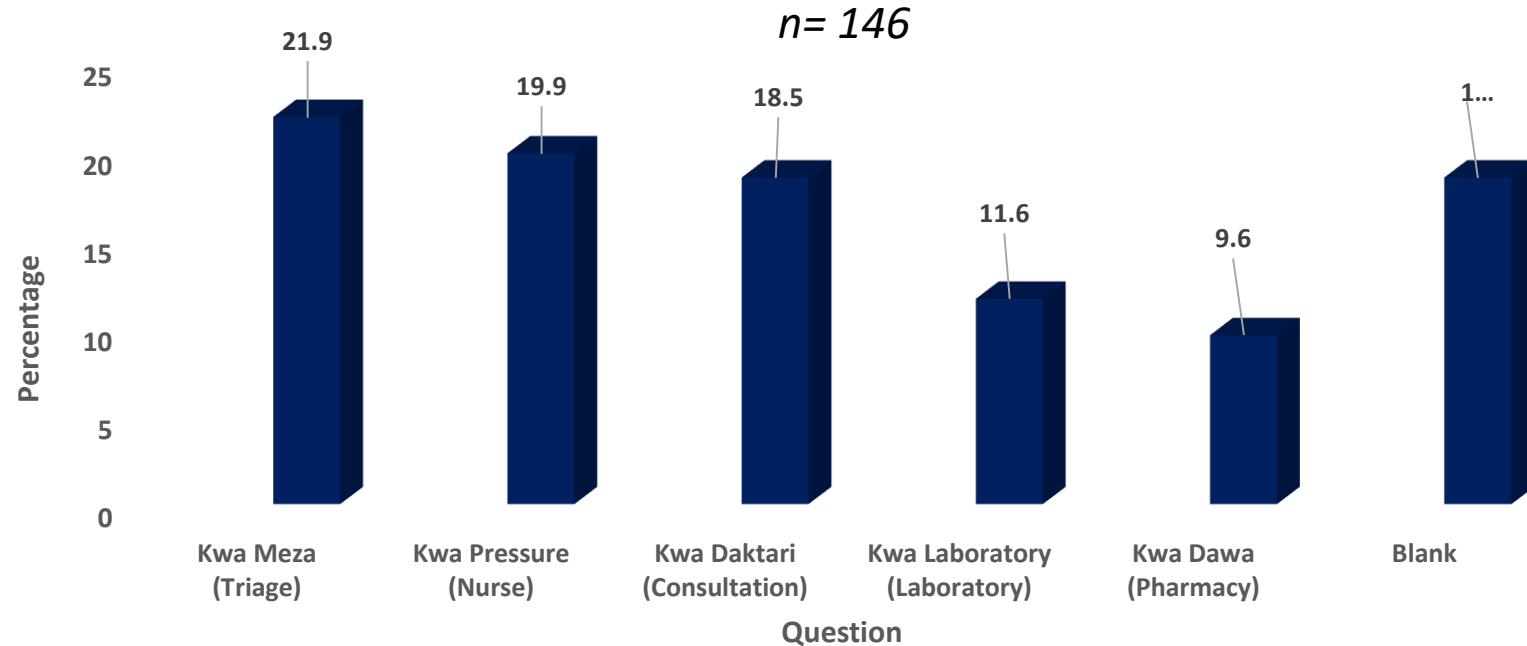
- ***“Unaonaje Huduma Zetu Ki Jumla?” (How are our services)***





Results (Display)

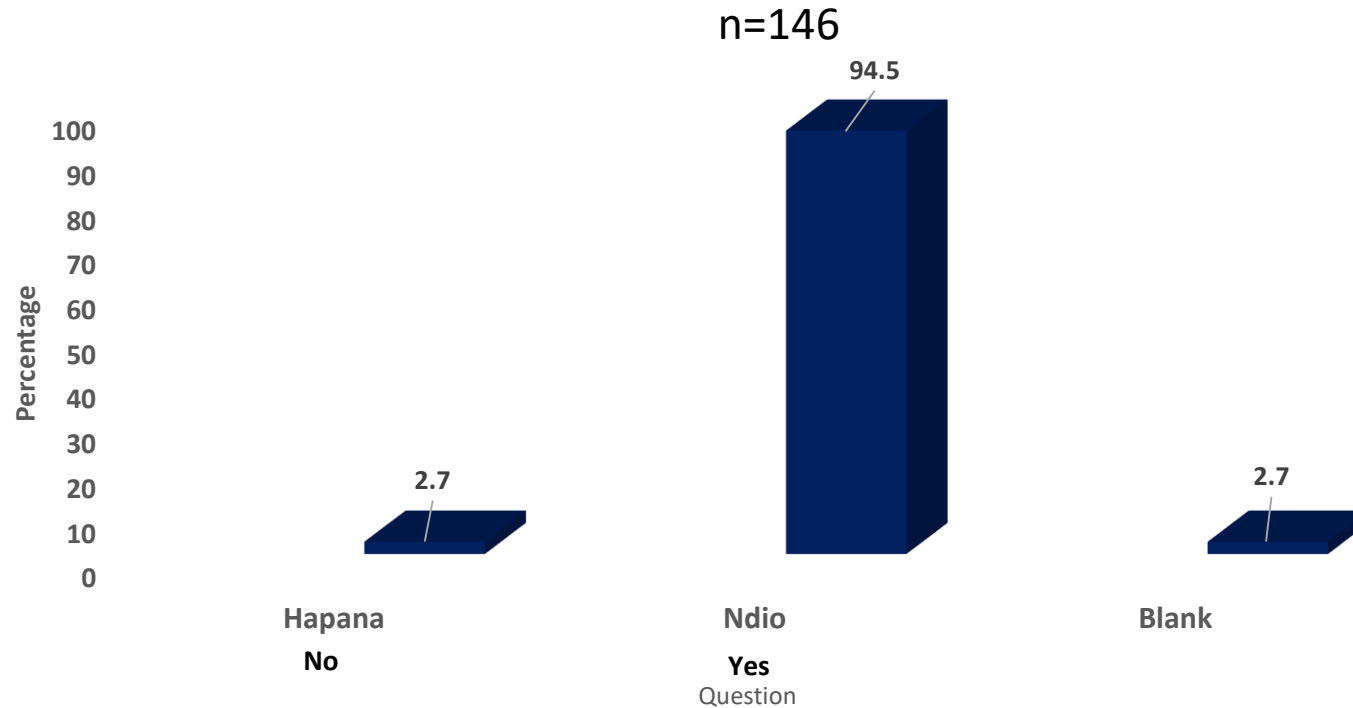
“Ni Sehemu Gani ya Huduma Inachukua Muda Wako Sana?” (Which service point is taking long to get served)





- Results (Display)

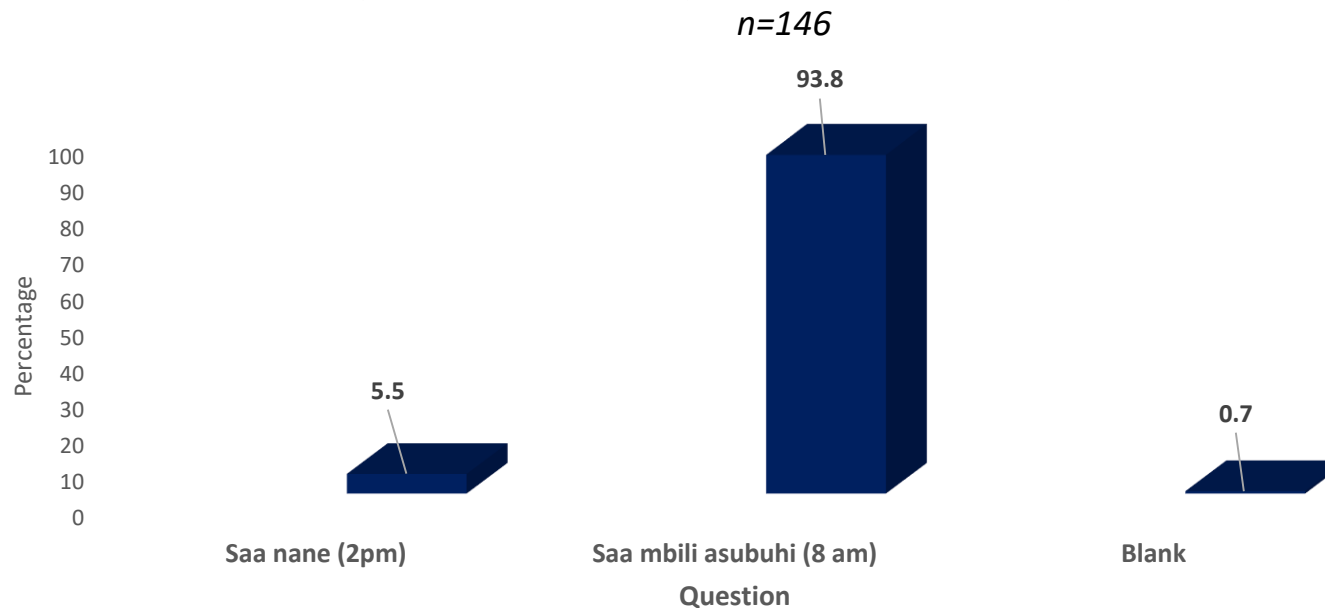
“Unajua Umuhimu wa Kupima Kiwango Cha Virusi Mwilini?” (Do you the Importance of Viral Load test)





- Results (Display)

“Ungependelea Wakati wa Kutolewa Damu ya Kupima Kiwango cha Virusi Iwe Wakati Gani?” (At what time would you like to have your viral load sample to be collected)

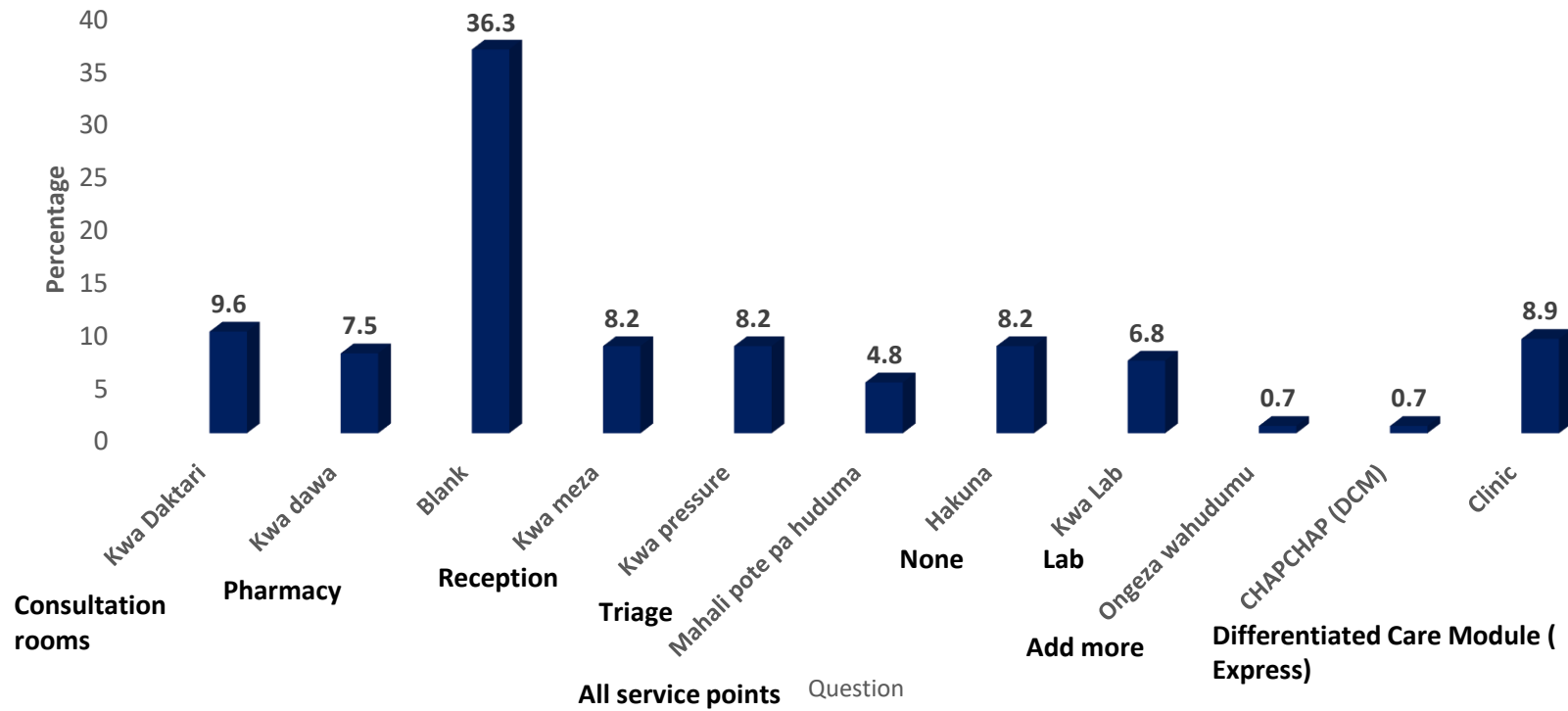




“Ungependelea tufanye marekebishi wapi”?(Which department would you like us to improve on

n=146

• Results (Display)





- **Voice of Customer (VOC)**
 - **What did you learn? How did you apply what you learned in your intervention?**
 - Team work was essential
 - Patients were receptive about the process
- **Challenge**
 - **Coming up with the relevant questions, i.e. the language, unbiased questions.**



- Metric Selected

- $$\frac{\# \text{ of patients with HVL not attending EAC (within 30 days) of receiving results}}{\text{Total \# of patients HVL results received}} * 100$$

- Baseline Data

- 47.7% (were not attending EAC within 30 days)



- Data Collection Process

- How many data points for baseline?
 - We had seven data points
- Timeframe of data collection. How frequently did you collect your data?
 - We were collecting our data on a monthly basis due to TAT and EAC timeframe (Enhanced Adherence Counseling **EAC**)
- – baseline & project data?
 - Baseline 47.7%
 - Ongoing 8%

- Data Analysis

- How did you interpret your data?
 - Using a run chart
- What did you learn about the magnitude of the problem?

Data Collection Tool



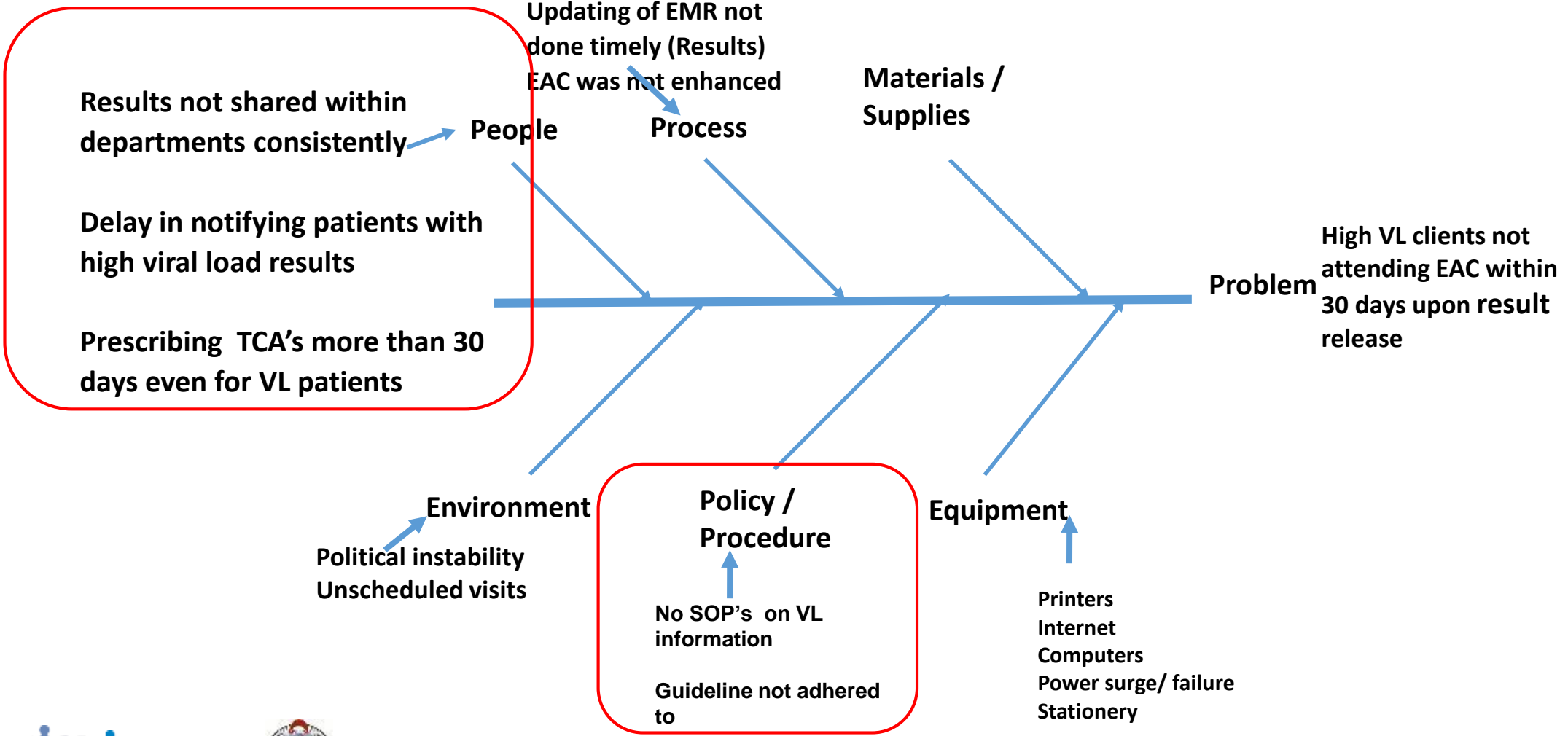
Lessons Learned

Successes

Just do it completed
Full support by the management.
Good Teamwork
Completed voice of customer
Communication platform.
Sensitization to the entire team .

Challenges/Solutions

- Holding meetings on time
 - *Prepared a meeting rota*
- Having every team member attending meeting was a challenge
 - *Ensured that the timing was appropriate for every member*
- Developing Aim statement.
 - *We brainstormed and consulted faculty member and TA*
- No funds for the project
 - *We got support form our management*





- **5 WHY on People**

- **Results not shared within departments consistently**

- **WHY**-Anyone could print results and update their own log, register, and EMR
- **WHY**-There was no focal person
- **WHY**-There was no SOP on results sharing

- **Delay in notifying patients with high viral load results**

- **WHY**-Clinicians never used to sensitize patients to come for VL results within 30 days
- **WHY**- There was no focal person to make follow up
- **WHY**- Result management was not standardized
- **WHY**- Guidelines were not followed

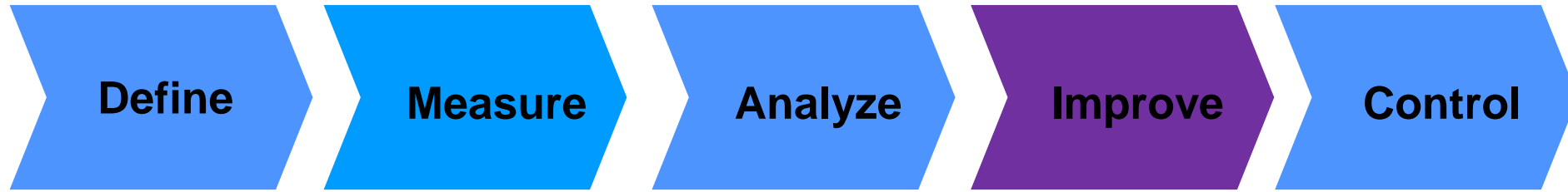
- **Prescribing longer TCA's even for VL patients**

- **WHY**- Clinicians had not been sensitized on shortening TCA's for VL patients
- **WHY**- There was no SOP on VL patient bookings



IMPACT / EFFORT GRID A Tool for Prioritizing Opportunities

IMPACT	Major Improvement	<p style="text-align: center;">Just Do It</p> <p>Avoid use of white out in the EAC diary</p> <p>Print out legible results from LIMS</p> <p>Use of the MFL in the lab order forms</p>	<p style="text-align: center;">Projects - Detailed planning and work</p> <p>Categorized into three:</p> <ul style="list-style-type: none"> a) Too many writing to be done (Log books) b) Follow up of patients with (HVL and those need a redraw) c) Tracking of missing results (Lab and NHRL), deficient sample referred process (Mismatch) <p>We settled for B, Follow up of patients</p>
	Minor Improvement	<p style="text-align: center;">Just Do It if Impactful</p>	<p style="text-align: center;">Maybe some day</p>
		Easy to Do	Difficult to Do
		EFFORT	



Just Do It 1

PID (ccc #) should be complete with the MFL code

Facility staff not to use white-out

LIMS summary report format should be eligible and printed by batch

Results not shared within departments consistently

Just Do It 2





5S - BEFORE



5S - AFTER

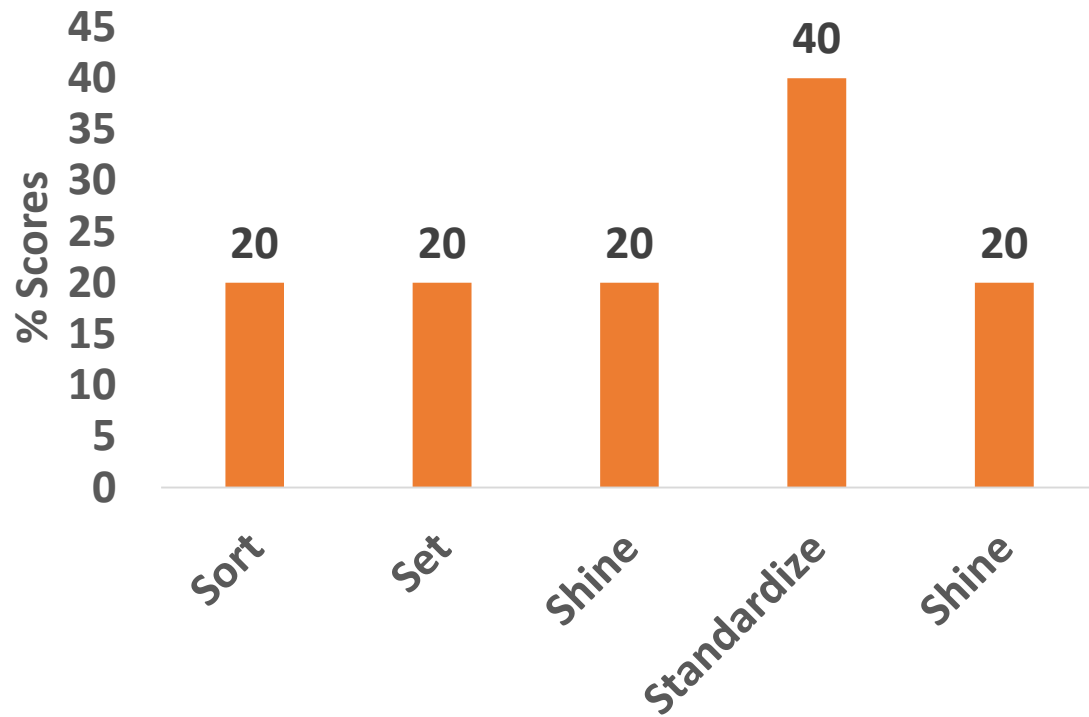




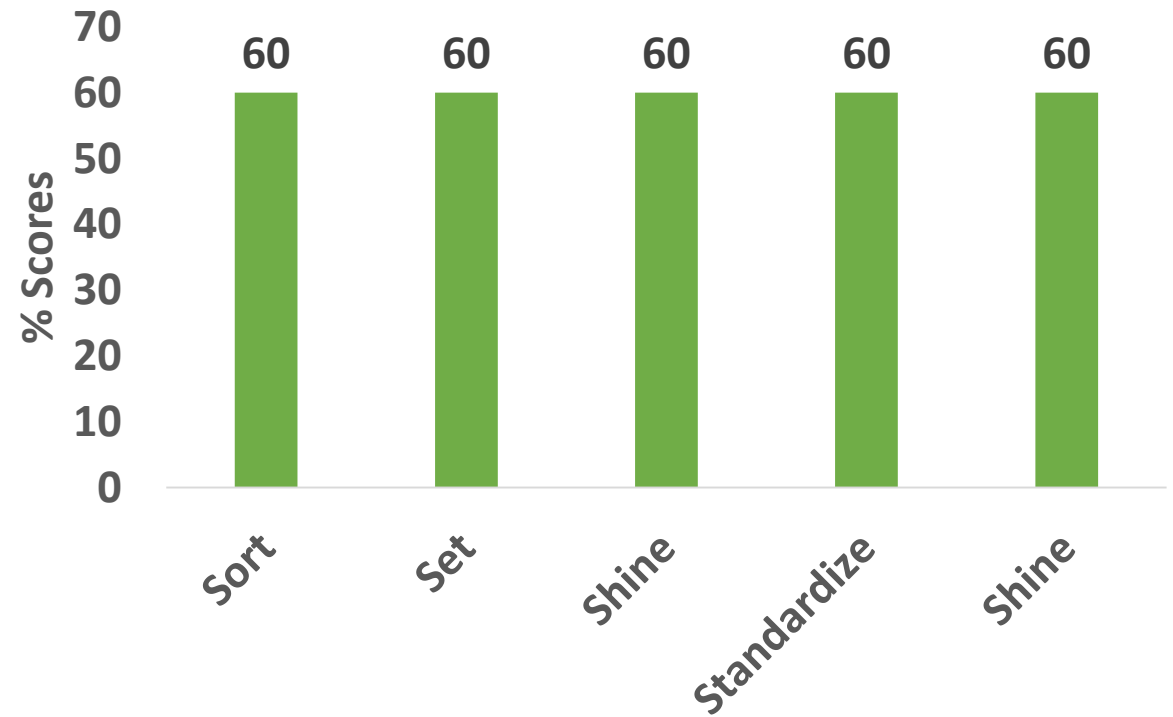
5S - BEFORE

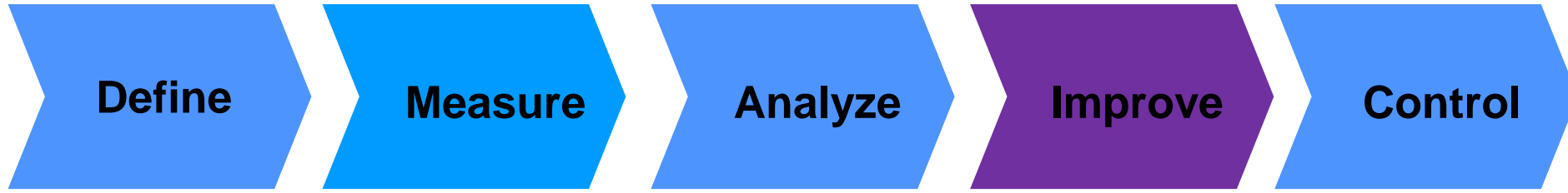
5S - AFTER

5s Audit Score



5s Audit Score





5s

Before



After





Visual Management



PLACE YOUR VACCINES CORRECTLY IN THE FRIDGE

Horizontal / Chest opening (e.g RCW 42 EG / RCW 50 EG)	Vial once opened
Pneumococcal Vaccine (PCV10) → RED TRAY	PCV - Discard
Pentavalent Vaccine → ORANGE TRAY	Pentavalent - Return
Tetanus & Inactivated Polio → YELLOW TRAY	TT - Return IPV - Discard
Rotavirus Vaccine → GREEN TRAY	Rotavirus - Discard
BCG & Measles Vaccine → BLUE TRAY	BCG - Discard Measles - Discard
Oral Polio & Yellow fever Vaccine → PURPLE TRAY	OPV - Return YF - Discard

Always monitor and record your refrigerator temperature twice daily

Use temperature recorder daily to record temperatures at all times
 Always place daily temperature recorder on the red tray
 Maintain fridge temperature between 2°C + 8°C plus
 Vaccines should be stored in appropriate vaccine tray
 All open vials should be discarded 28 days after opening (Refer to ADRSP guidelines)
 Ensure proper maintenance and repair of the fridge
 Include this fridge in not working equipment customer's plus immediately

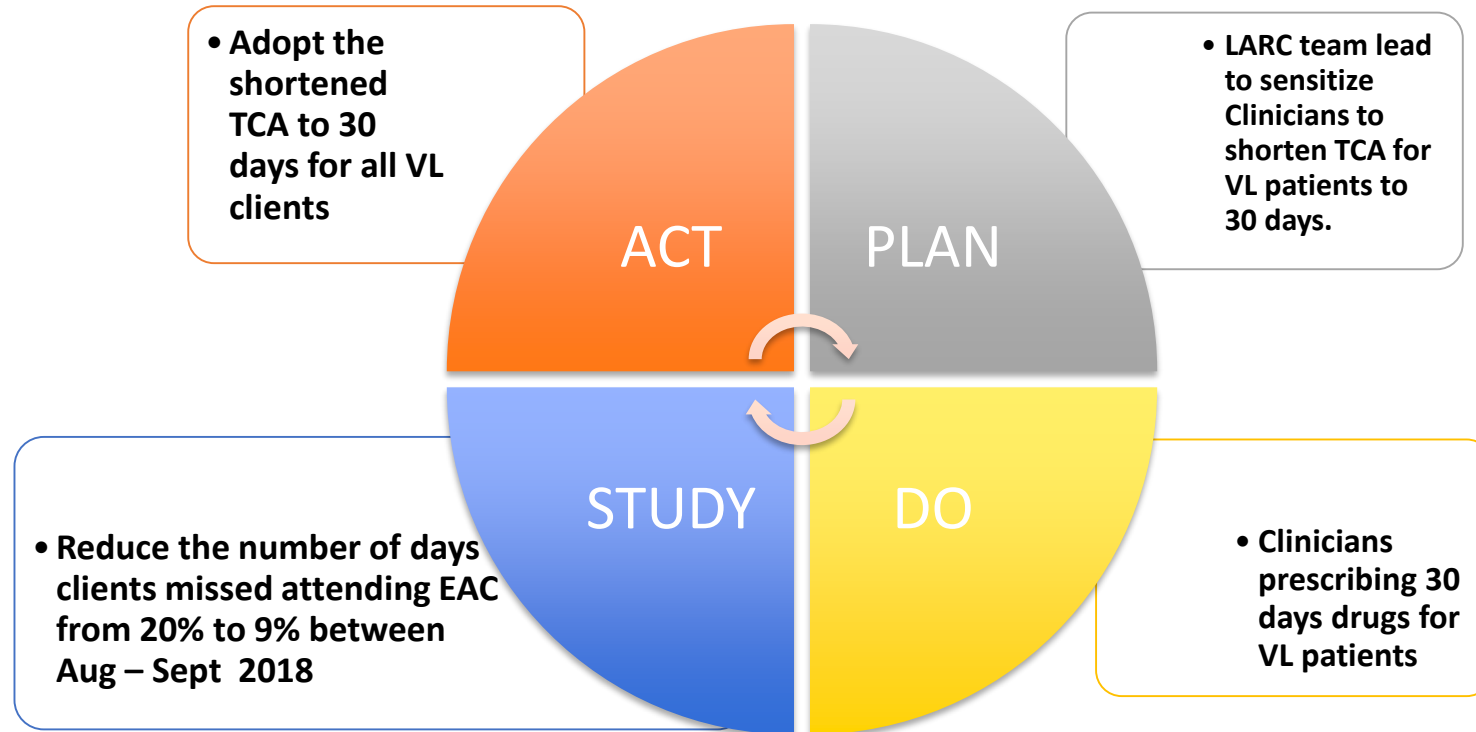
1. Move vaccine to nearest working fridge
 2. Call
 In Charge
 DRYAN
 Technician

ENTRANCE / EXIT	PALETTE	RECEIVING AREA	SOLAR FRIDGE
		PALETTE	SHELF A
			SHELF B
PALETTE		SHELF C	SHELF D
PALETTE		SHELF E	SHELF F
PALETTE	SHELF K	SHELF J	SHELF I

Shelf A: IAB pens and syringes.
 Shelf B: Cleaners & Disinfectants, Eye drops, Analgesics, OMS, Multivitamins, Pills, Ferrusol & Antihistamine.
 Shelf C: Suspensions & Syrings.
 Shelf D: Antibiotics, Injections, Antacids & Omeprazole.
 Shelf E: Syringes, Needles, Bandages, Cotton Wool, Gauze & Gloves.
 Shelf F: Pre-washed Surgical Blades, POP, Casires & Surgical Gloves.
 Shelf G: High Water Tents & DCPs.
 Shelf H: Contraceptives.
 Shelf I: Inhalers, Masks & Goggles Sets.
 Shelf J & K: IIRV's & Intra O's.

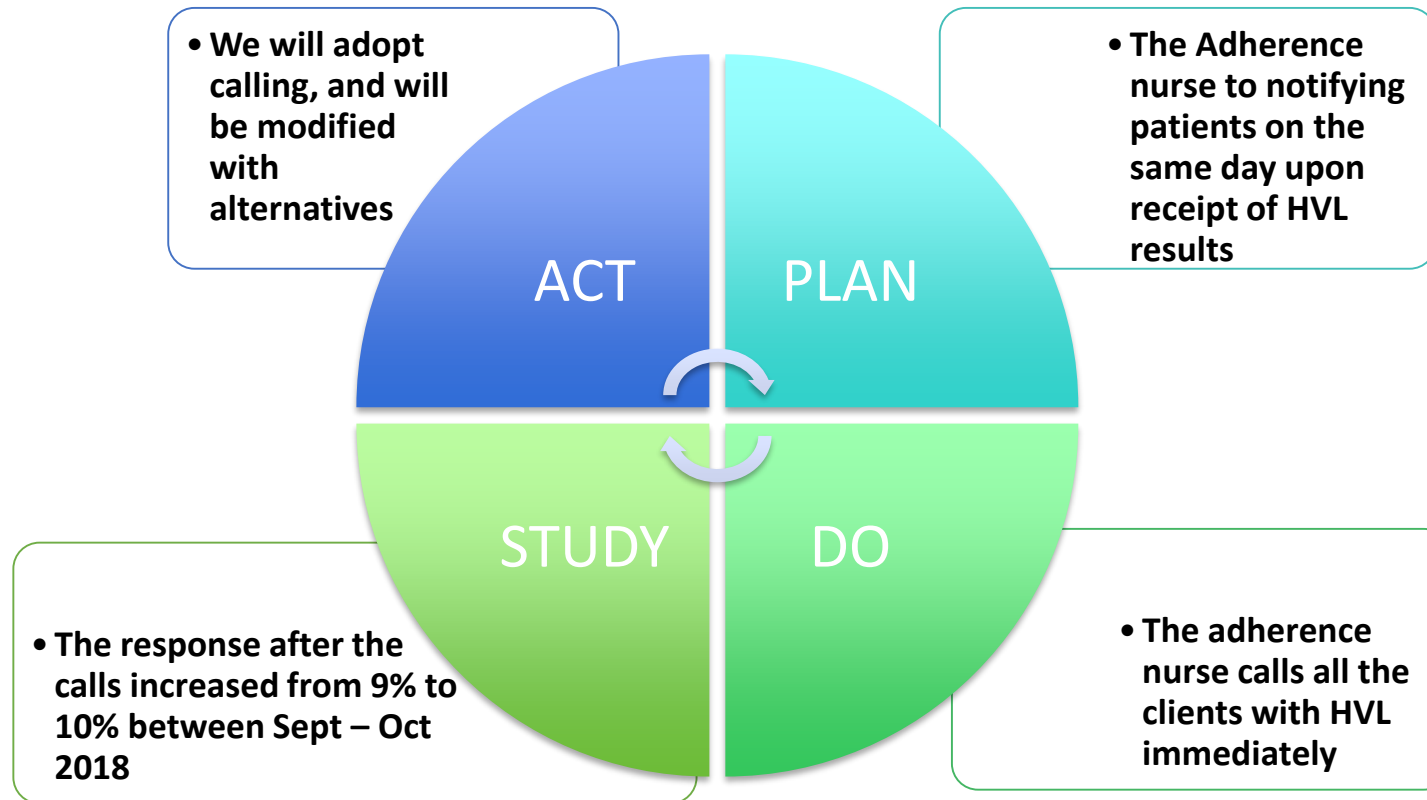


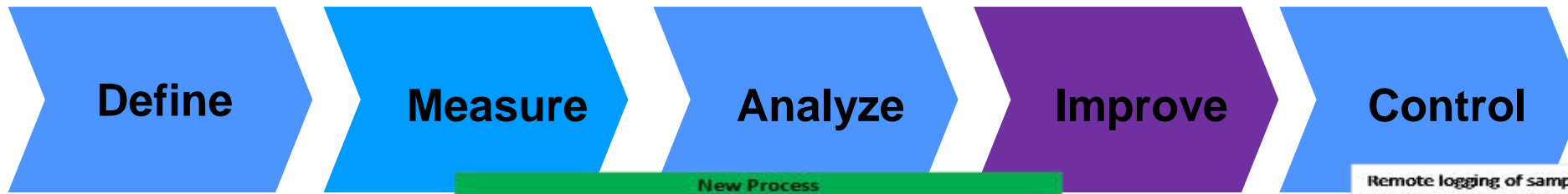
- Small Test of Change (PDSA #1)





• Small Test of Change (PDSA #2)

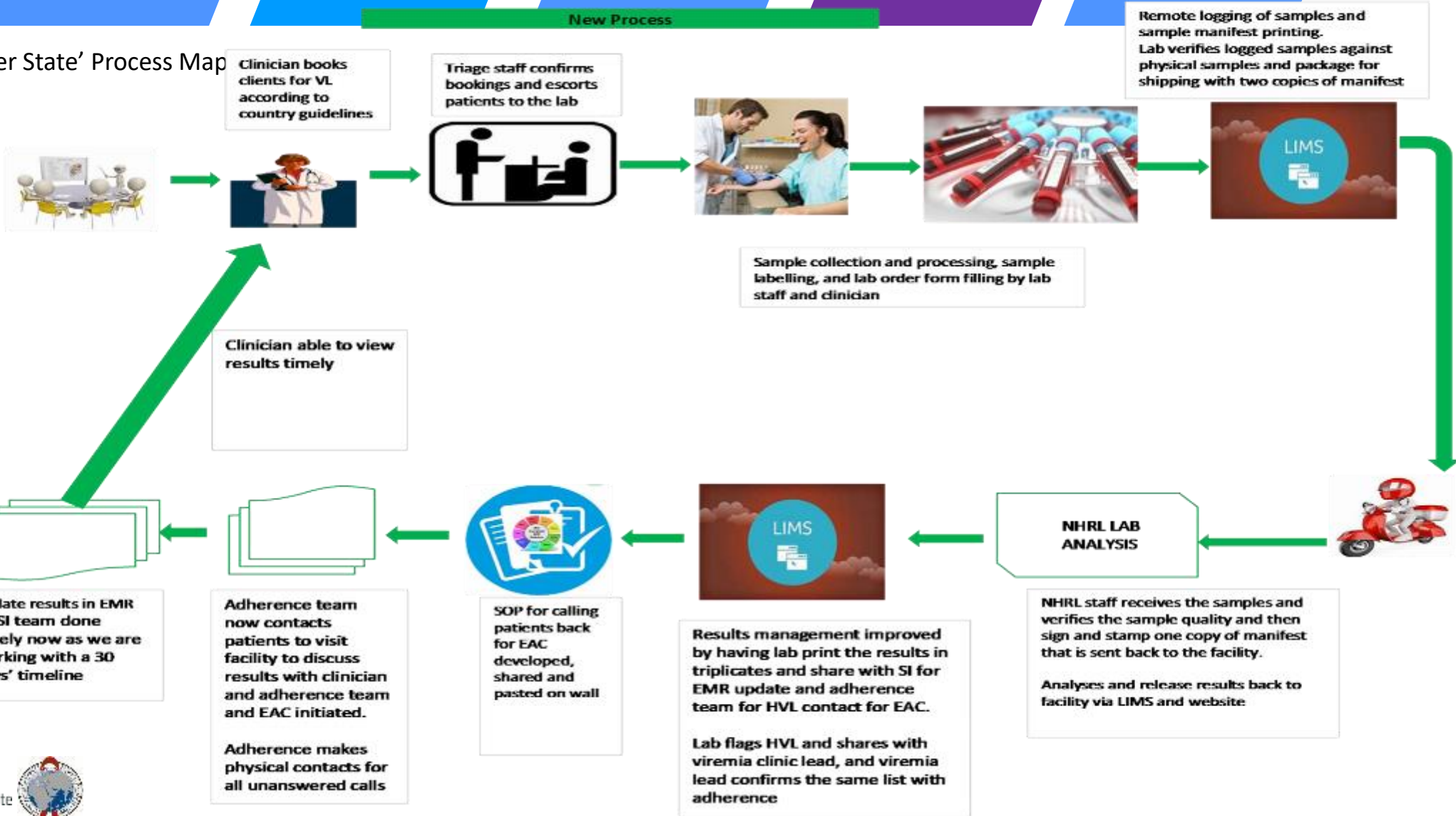


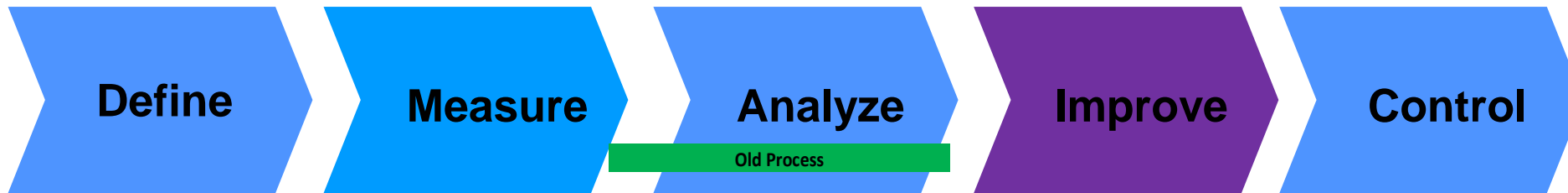


Intervention – ‘After State’ Process Map

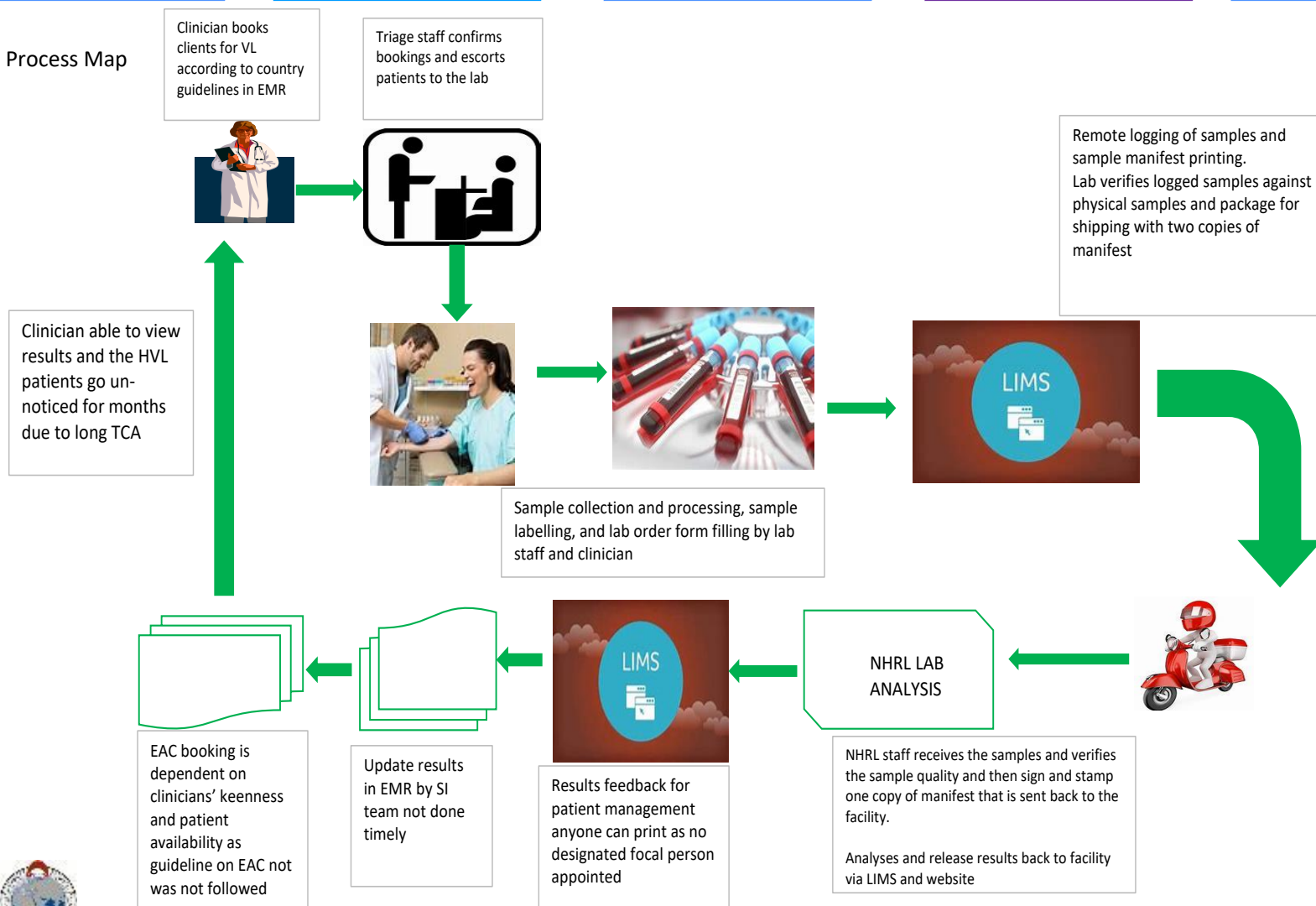
Patient Notification Process Improvement

- Training clinicians on shortening TCA to 30 days
- Patient sensitization on shortened TCA and importance of VL monitoring
- SOP for calling patients using a script developed and shared to all adherence team
- Call patients immediately upon receipt of HVL results
- Physical tracing for those whose phone calls don't go through.

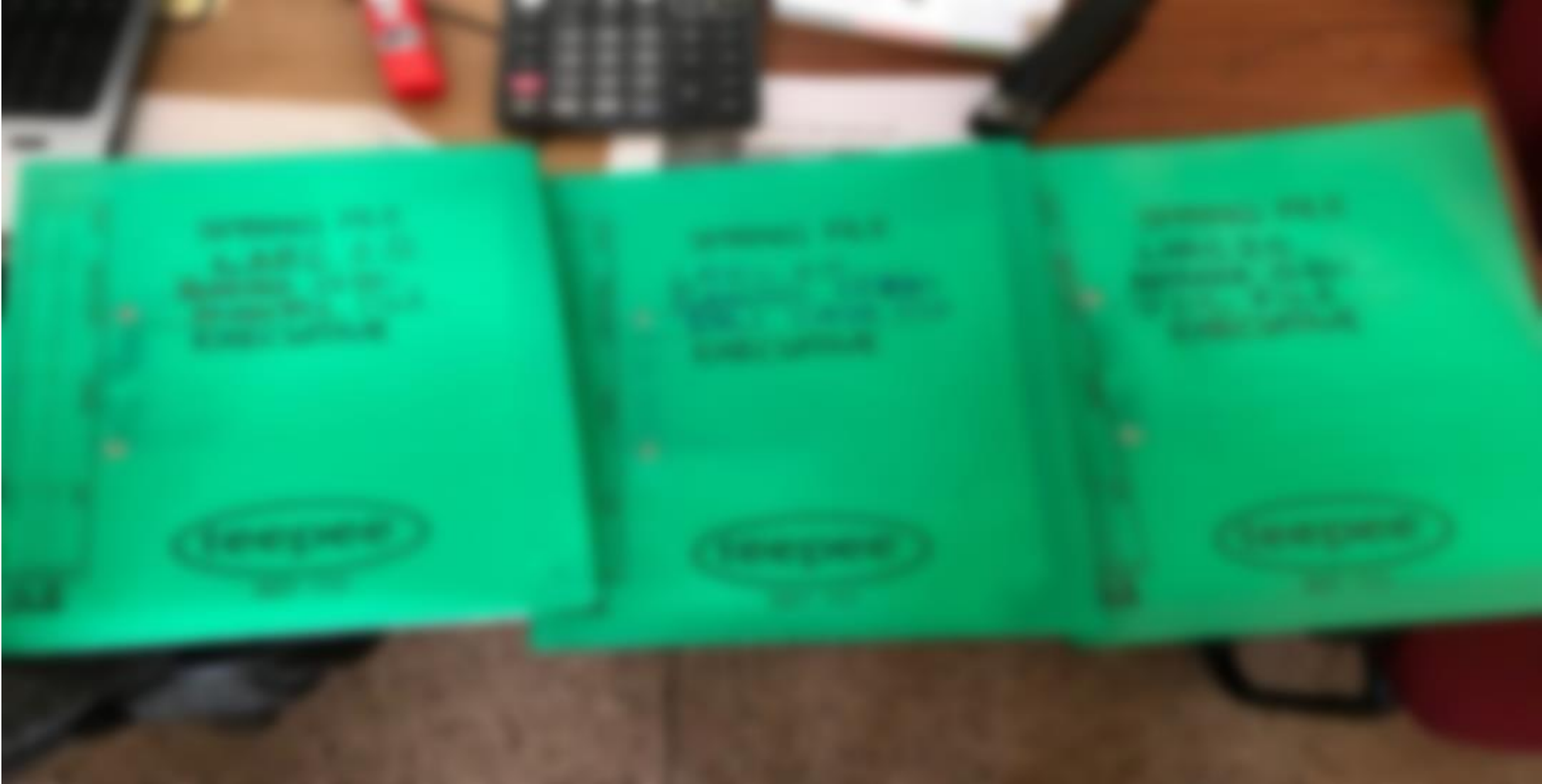




Intervention – ‘Before’ State Process Map

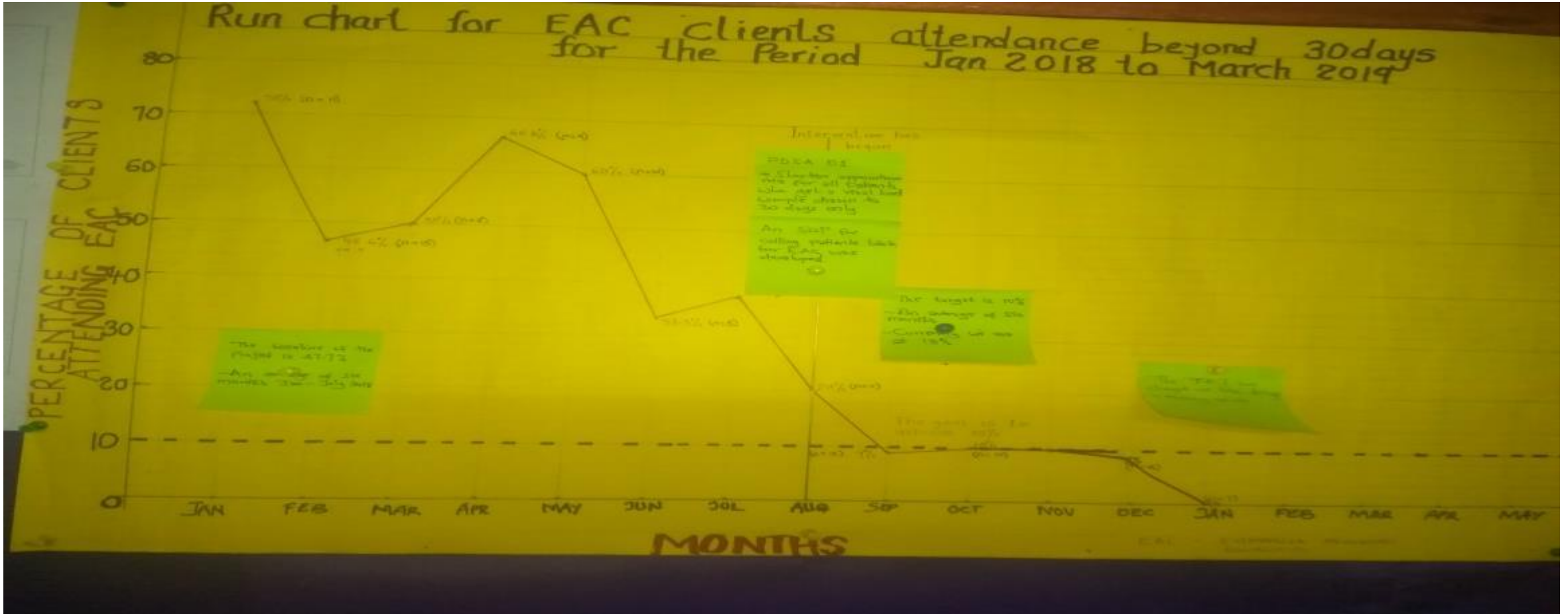


Tools for the Project



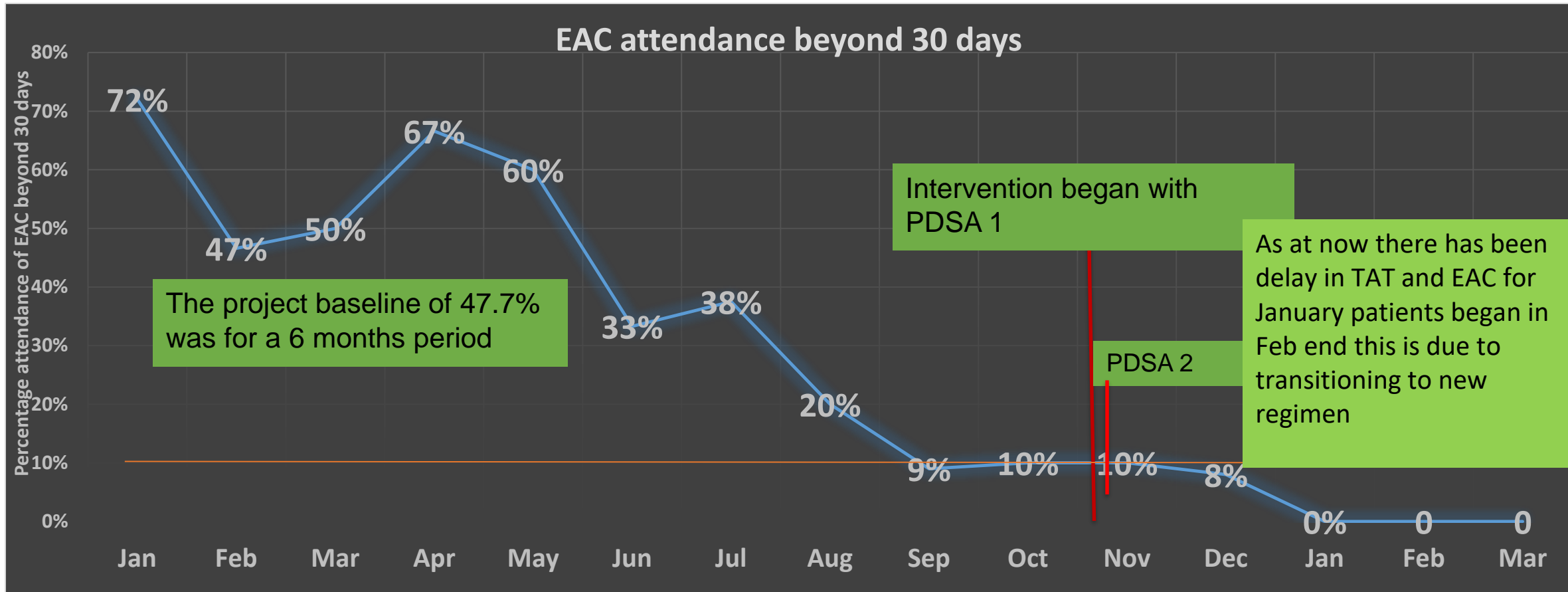


• Data Display





• **Data Display**



Challenges

Challenges

- Holding meetings on time
- Having every team member attending meeting was a challenge
- Developing Aim statement.
- No funds for the project

Address challenges

- Prepared a meeting rota
- Ensured that the timing was appropriate for every member
- We brainstormed and consulted faculty member and TA
- We got support form our management

What did the team learn? Reflect on what you will do differently in the future.

Lessons Learned

- **Inter departmental communication and collaboration is very important.**
- **Meetings are vital and social media came in handy as a means of dispersing information and updating each team member.**
- **The use of the learning board kept us informed and also helped educate the rest of the staff members and visitors to.**
- **It is scale able to other departments.**
- **Use of tools makes it easy to implement the project.**
- **QI is iterative**

Action Plan

TOPIC/GOALS	ACTION ITEM	BY WHO?	BY WHEN?
Fastrack VL and TB patients	Escort TB patients to the Lab		Daily
Created more space for the learning board			November
PDSA 2	Routine updates		December
Revised schedule for the meetings	Dates and time		January
Updating the learning and just do it	Routine updates		Monthly
Notifying patients with high viral load results	Routine		Same day of viral load results received

Control Plan

Project Title Viral Load Results Interpretation and Patient Management

Project Owner - Project Coordinator

Process Step: Shortening Appointments to 30days and Patient Notification Is there a vulnerable step that may revert to the “old way” over time? Yes. Giving longer appointments of more than 30 days, and delayed patient notification.

Output: Immediate notification of high viral load results and shortened appointments.

Metric– Define the metric: The number of high viral load patients attending EAC within 30 days of results received over the total number of high viral load results received.

Acceptable Range – From 47% to 10%

How measured – Data Collection Plan: Monthly data collection.

Control or Reaction Plan

If the metric goes out of range, what will be done? What is the first step?

We will go back to our PDSA and new process map and see where the gap has come from.

Accountability

Who is responsible for measuring –Data Manager

Where is the measure reported – Facility LARC Team Members and Learning Board

To whom is it reported – Project Coordinator

Who is ultimately responsible –Lab Technical Assistant