

Myanmar Implementation of ePT and how data and analysis are utilized to monitor site performance over time

RTCQI Community of Practice (COP) webinar

August 7, 2025



Content



Implementation of the electronic Proficiency Testing (ePT)



Utilization of PT data for improvement



Challenges and lessons learned

1. Implementation of ePT

Overview of National External Quality Assurance Scheme (NEQAS) program for serology testing in Myanmar

Since 2005, the National Health Laboratory (NHL) of MOH conducts biannual NEQAS rounds to ensure quality assurance of PT participants.

65 participating sites in 2005 and gradually expanded to **450** sites in **2024**.

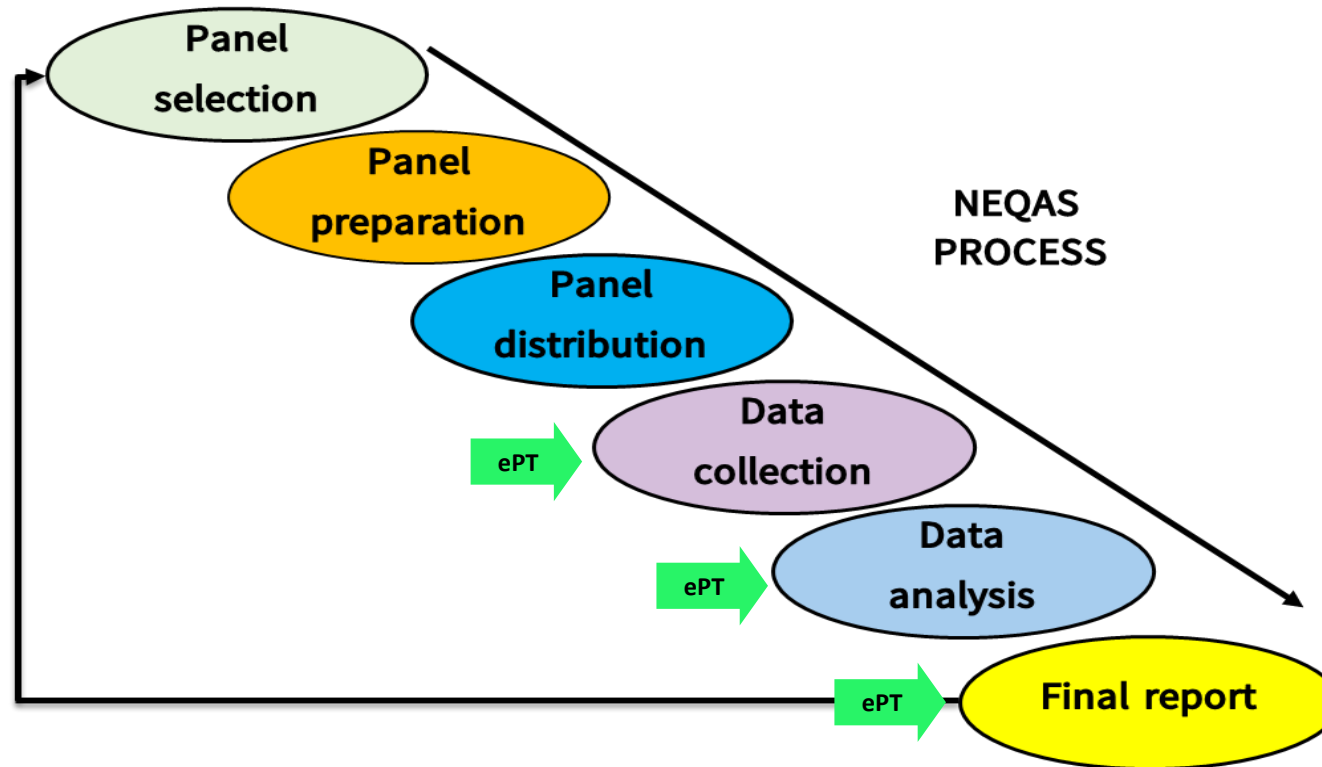
Since 2020, CDC-ILB, through ICAP, has supported the implementation of **electronic proficiency testing (ePT) system** to streamline PT data management.

NEQAS Process

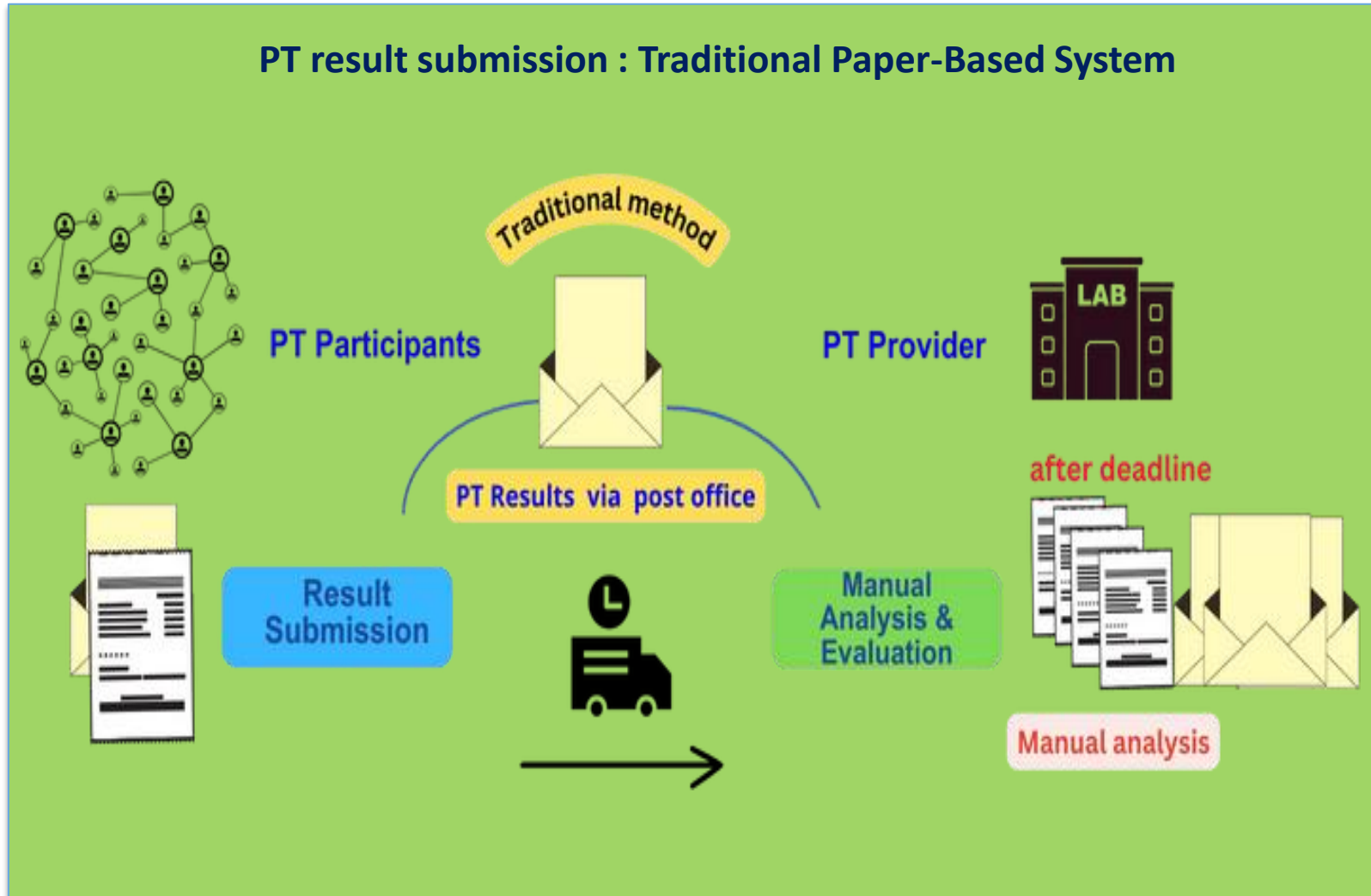
Enrollment Form



New Participant



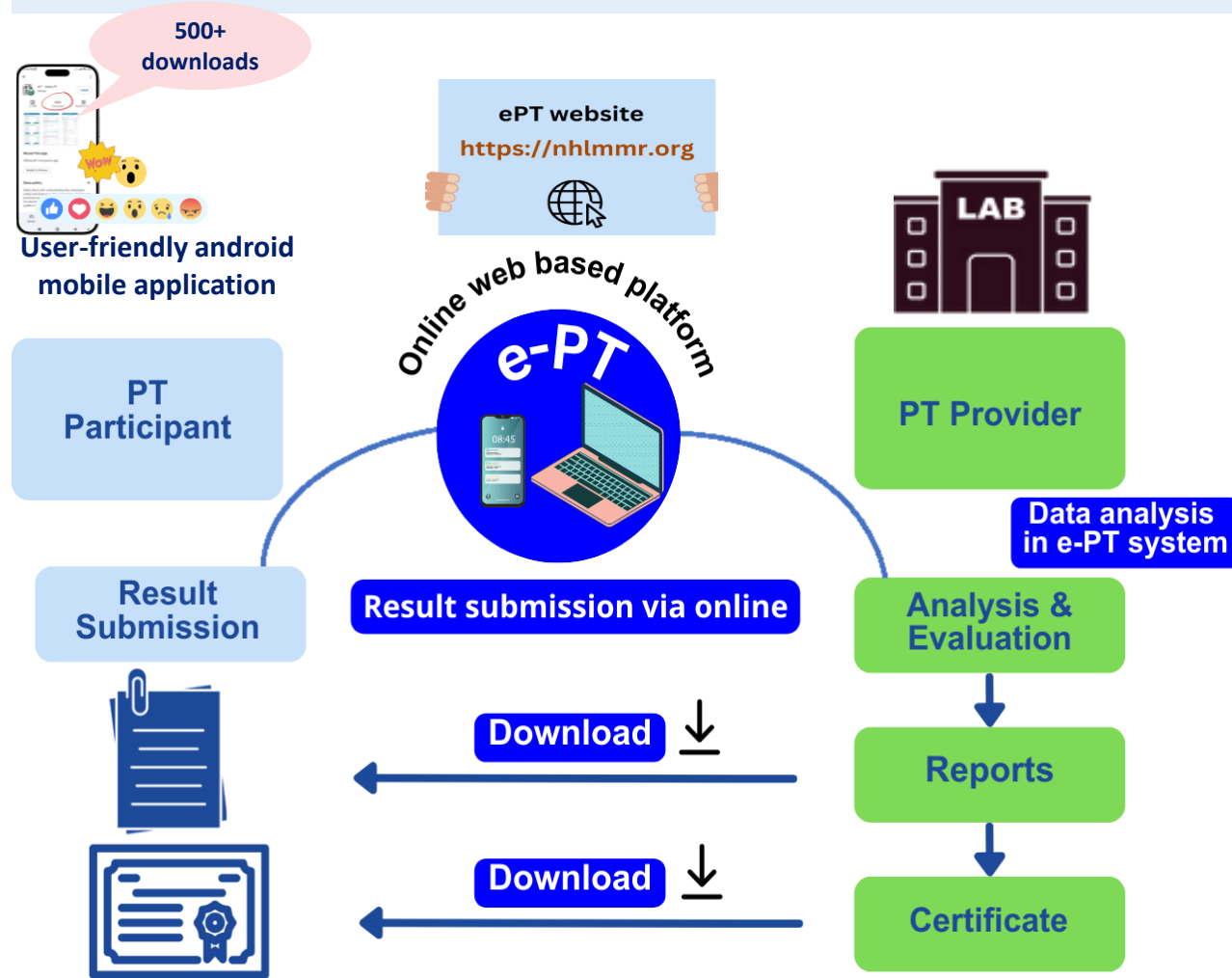
PT result submission (Paper-Based System)



Challenges

- **Loss of results** during transportation
- **Delays in result submission**
- Prone to **clerical errors** and requires extensive time for data compilation and manual analysis by the PT provider
- **Delay in feedback provision (4 -6 months)** hinders timely corrective action when required

PT result submission (ePT system)



The ePT is a web-based system that enables participants to submit their results online, automates the result evaluation workflow for the EQAS provider, and delivers feedback reports electronically.

- Following the result submission deadline, the PT provider reviews the automated evaluation results and prepares the **summary and individual feedback reports** through e-PT
- The PT provider notifies participants by email that **the feedback reports** are available for download via e-PT
- The feedback reports are generally issued within **one month** following the result submission deadline
- The laboratory supervisor or the focal person of testing site ensures the EQA report is shared with relevant staff in the laboratory or testing site.


ePT Website

<https://nhlmmr.org/auth/login>

ePT .

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ePT Participant Login



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This project is supported by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) through the U.S. Centers for Disease Control and Prevention (CDC). | v7.2.2

https://nhlmmr.org

ePT .

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RESOURCE

ePT Resources

Download useful resources and documents to help you improve your lab testing.

User instructions for ePT included

Downloads

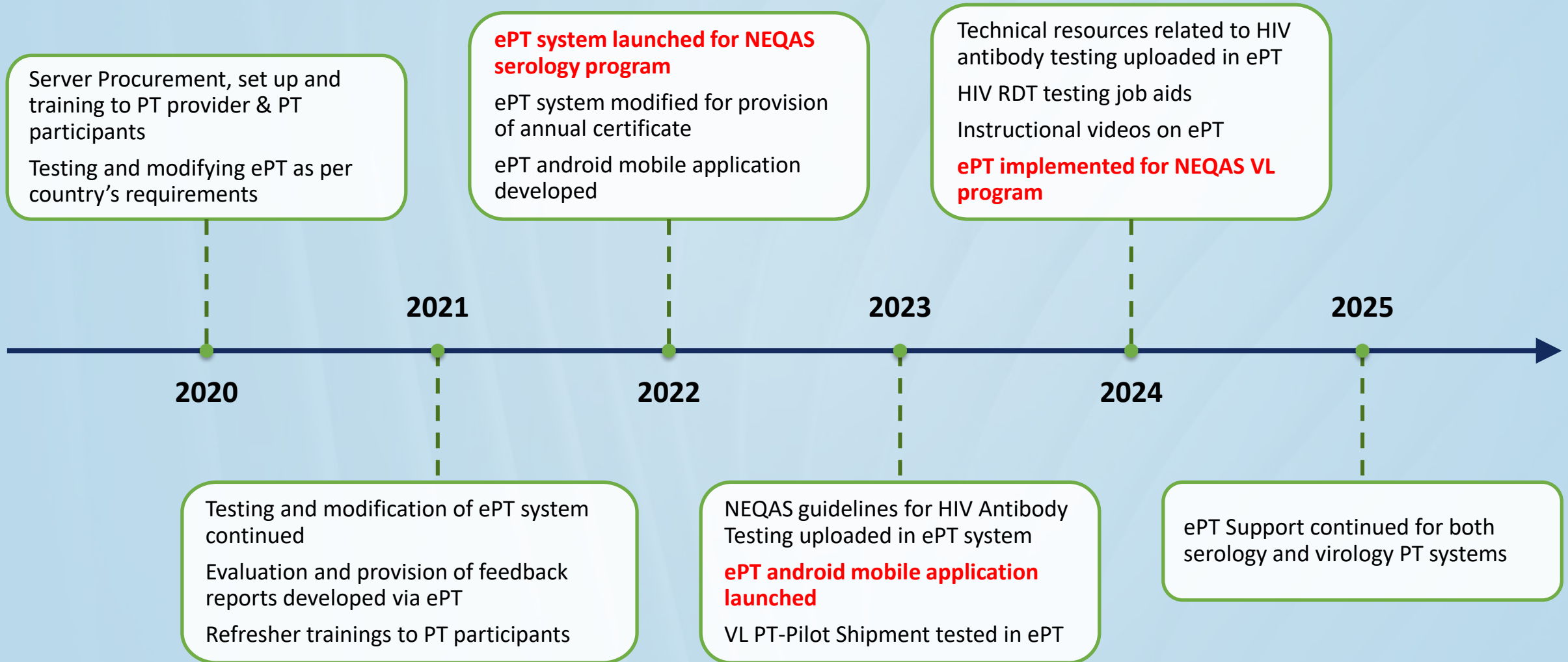
- NHL HIV Serology EQAS Guideline 2023
- Myanmar National Guideline on HTS 2018
- HIV Determine Job-aid
- HIV Syphilis Duo Job-aid
- HIV Unigold Job-aid
- HIV Stat-Pak Job-aid

Instructional videos for ePT

Video Guides

- Serology PT result submission (PC version)
- Serology PT result submission (Android version)
- Serology PT report downloading (PC version)
- Serology PT report downloading (Android version)

ePT System Implementation Timeline



2. Utilization of ePT data for improvement

Sample PT feedback reports generated from ePT

Individual Report

Shipment Date
17-Jun-2024

Panel Receipt Date
12-Jun-2024

Response Date
11-Jul-2024

Supervisor Review
Yes

Operator Name
[REDACTED]

Shipment Code
Panel38-Confirmation

Result Due Date
12-Jul-2024

Shipment Test Date
25-Jun-2024

Supervisor Name
[REDACTED]

Confirmation(17-Jun-2024)

Shipment Type
HIV Serology

Algorithm
Myanmar National Algorithm

Your HIV Proficiency results :

	Test-1	Test-2	Test-3		
Kit Name	Abbott_Determine HIV-1/2	Abbott_Bioline HIV-1/2	ACE BIO_ HIV 1/2		
Lot No.	0000744168	03ADH030C	GJ23060650		
Expiry Date	12-Dec-2024	07-Jan-2025	16-Jun-2025		
Specimen Panel ID	Result-1	Result-2	Result-3	Expected Result	Your Result
HIV 1/38 (1/24)	NR			N	N
HIV 2/38 (1/24)	R	R	R	P	P
HIV 3/38 (1/24)	R	R	R	P	P
HIV 4/38 (1/24)	NR			N	N
HIV 5/38 (1/24)	R	R	R	P	P

(R = Reactive, NR = Non Reactive, P = Positive, N = Negative, I = Invalid, Ind = Indeterminate)

Documentation Items Considered For Scoring	
Supervisor Approval	
Panel/Shipment Receipt Date Specified	
Reporting of the Shipment Test Date	

Summary Report

# of Participants	# of Responses	# of Valid Responses	# of Participants Scoring > "90"	# of Participants Scoring < "90"	Average Score (total score / # of valid responses)
365	357	356	330 (92.44%)	26 (7.28%)	97.2

	Sample ID				
	HIV 1/38 (1/24)	HIV 2/38 (1/24)	HIV 3/38 (1/24)	HIV 4/38 (1/24)	HIV 5/38 (1/24)
Expected Result	Negative	Positive	Positive	Negative	Positive
# of Valid Responses	356	356	356	356	356
# Correctly Reported	356 (100%)	355 (99.72%)	355 (99.72%)	356 (100%)	355 (99.72%)

Corrective Action Overview

Corrective Action	Responses having Corrective Action
Review all testing procedures prior to performing client testing and contact your supervisor for improvement.	26
Review and refer to SOP for testing. Sample should be tested per National HIV Testing algorithm.	20
Ensure expired test kits are not used for testing. If test kits are not available, please contact your superior.	8
You are required to test all samples in PT panel	0
Ensure test kit name is reported for all performed tests.	0
Ensure to provide supervisor approval along with his name.	0
Please submit response before last date	1

PT Summary Report: Reasons for failed sites (Sample)

PT Survey

2024-01-HIV Serology-Confirmation

Shipment Code

Participant Performance Overview

# of Participants	# of Responses	# of Valid Responses	# of Participants Scoring > "90"	# of Participants Scoring < "90"	Average Score (total score /# of valid responses)
365	357	356	330 (92.44%)	26 (7.28%)	97.2

Corrective Action Overview

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Review all testing procedures prior to performing client testing and contact your supervisor for improvement.	26
Review and refer to SOP for testing. Sample should be tested per National HIV Testing algorithm.	20
Ensure expired test kits are not used for testing. If test kits are not available, please contact your superior.	8
You are required to test all samples in PT panel	0
Ensure test kit name is reported for all performed tests.	0
Ensure to provide supervisor approval along with his name.	0
Please submit response before last date	1
Review all testing procedures prior to performing client testing as reported result does not match expected result.	0
Review and refer to National HIV Testing Algorithms for result interpretation as final result interpretation does not match with expected result.	1

- Common reasons
 - Not following the algorithm (i.e., performing A2 and A3 on Non-Reactive results)
 - Use of expired test kit
- After the feedback report are available, HTS sites with failed PT are followed up via phone for corrective actions

Analysis of ePT Data

ePT data from each PT round is analyzed to assess **performance trends** and identify **strengths and weaknesses by HTS site category**, informing targeted interventions to improve the performance.

Participant
performance
review

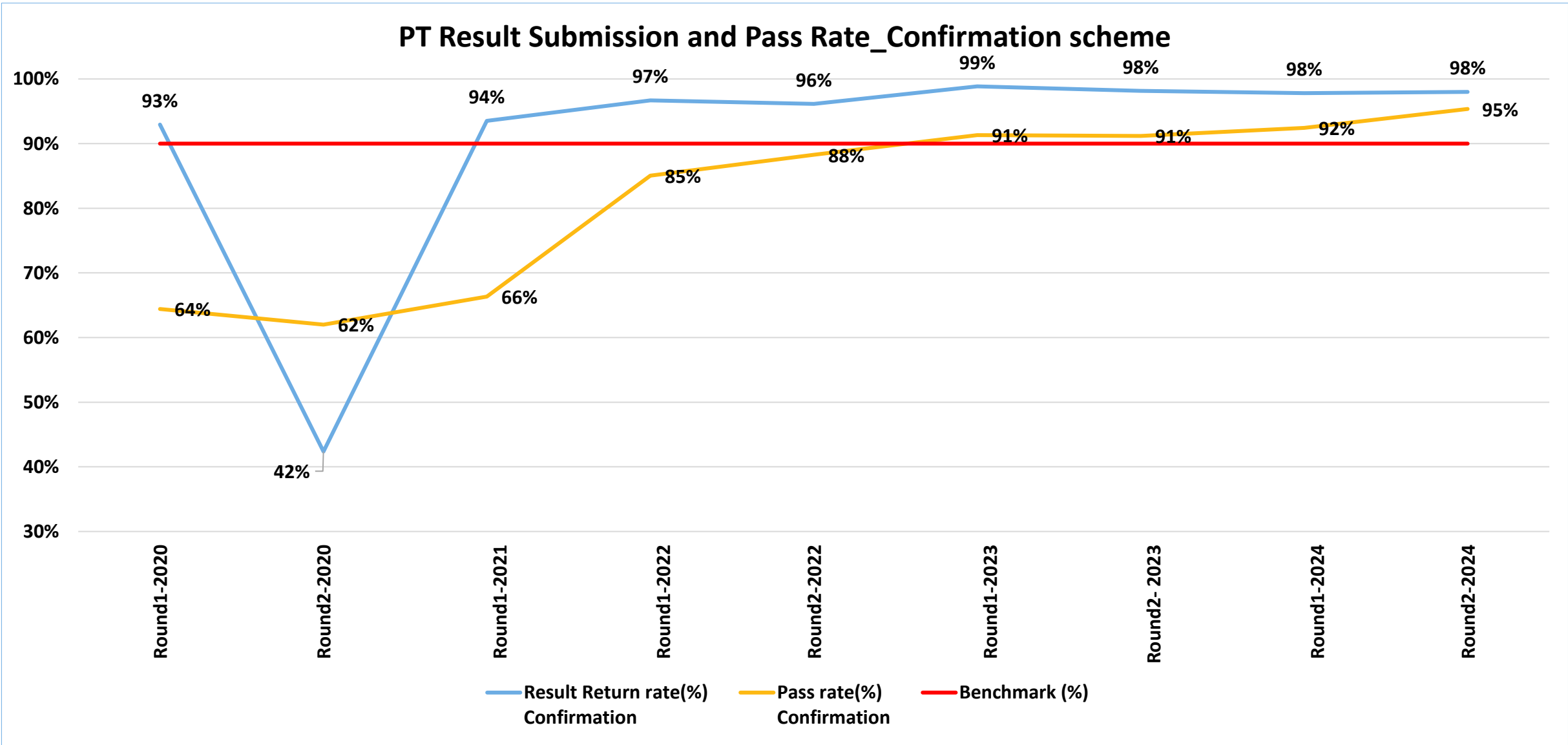
Reasons for failed
sites

Participating
laboratories per
category

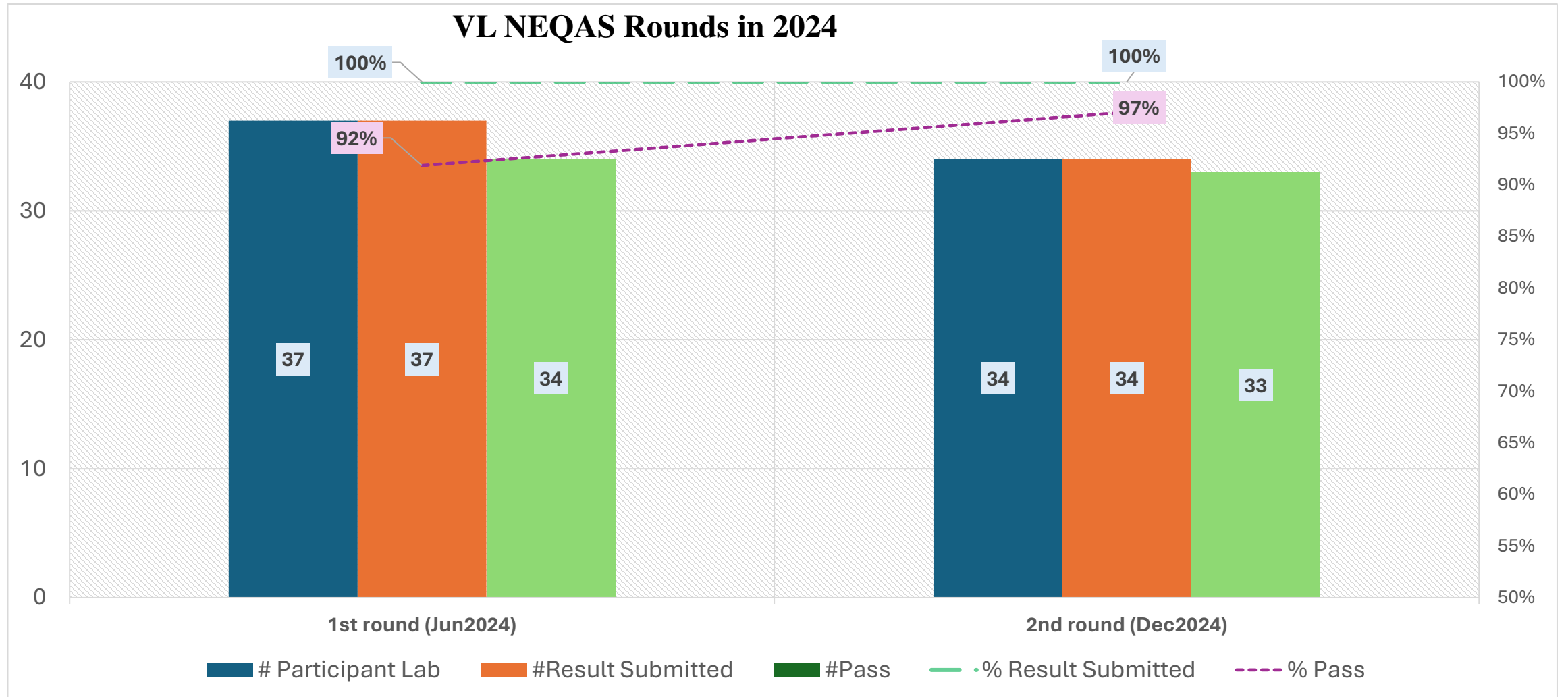
Timeliness of
reporting results

HIV testing assay
used by
participating
laboratories

Achievements (HIV serology PT) 2020-2024



Achievements (HIV viral load PT) - 2024



Utilization of PT Data

PT participant

- The PT feedback report is an essential tool to monitor the accuracy and reliability of their performance
- If any aberrant results in PT rounds, they could investigate the cause and take corrective action for improvement

PT provider

- After each PT round, PT data is analyzed from different quality monitoring aspects
- ➔ Result submission and passed rates
 - ➔ Timeliness of result submission
 - ➔ Different HIV test assays used by participants
 - ➔ Performance score by the participants to decide training requirement

Usefulness of ePT Data in Programmatic Aspect

Educational Tool

- Helps to identify the **continued education program** that will be required by PT provider

Post-Marketing Surveillance

- Helps to monitor the **overall performance** of laboratory test kits, methods and equipment

Monitoring and Evaluating Program

- Helps to indicate **quality improvement** for being as quality indicators

3. Challenges and Lessons Learned

Challenges

- **Internet access:** The use of the ePT platform is limited for the participating sites in remote area with unstable or limited internet access.
- **HR turnover/ training requirement:** Due to limitation in NHL's capacity to provide regular refresher training for all HIV Testing Services (HTS) sites, sites with frequent staff turnover are prioritized for annual NEQAS and ePT training.
- **Transportation challenge:** Due to limitation of transport routes, PT panels could not be shipped to some HTS sites even though they are functioning.

Lessons Learned

- ePT system was **key to sustaining the NEQAS program** despite challenges posed by the COVID-19 pandemic and associated with political upheaval.
- By replacing paper-based systems, it ensured **uninterrupted operations and consistent result submission rate** during the challenging period.

Thank you for your attention!

We would like to express our heartfelt gratitude to:

- **CDC International Laboratory Branch (CDC-ILB)** for their invaluable technical guidance and support in the implementation of RTCQI
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