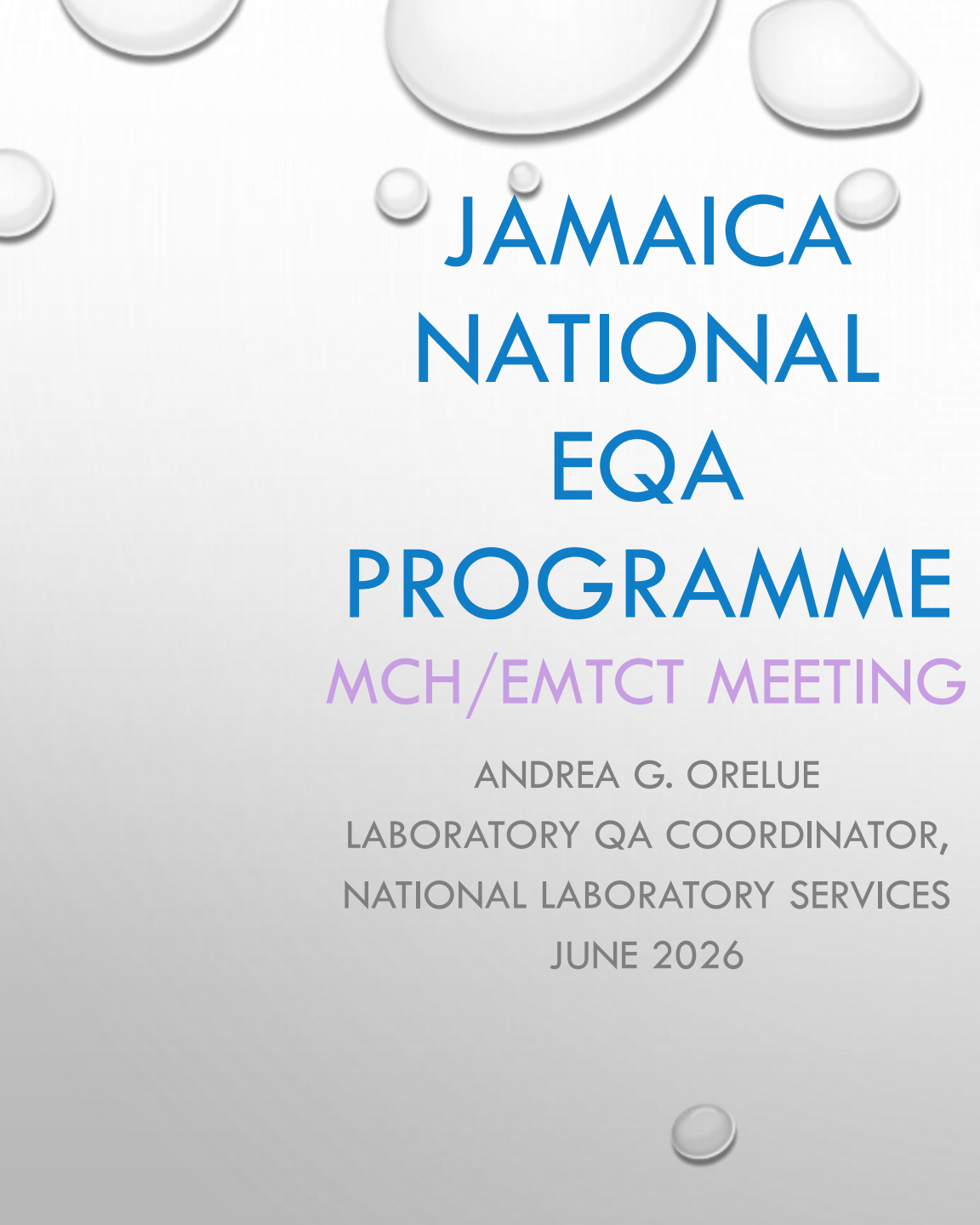




JAMAICA NATIONAL EQA PROGRAMME

MCH/EMTCT MEETING

ANDREA G. ORELUE
LABORATORY QA COORDINATOR,
NATIONAL LABORATORY SERVICES
JUNE 2026



INTRODUCTION

NATIONAL LABORATORY SERVICES (NPHL & NBTS)

– 18 laboratories & 3 other technical departments* and support services

Haematology

Histology

Core Immunology

HIV

Media Preparation *

Parasitology

Tuberculosis

Molecular Microbiology Arboviral Testing Unit (MMATU)

Gene Sequencing Laboratory (new)

Specimen Reception & Accession *

Specimen Collection *

Emergency Laboratory (Located offsite – 24 hour service)

National Blood Transfusion Service Main Laboratory

Crossmatch Laboratory (Located offsite – 24 hour service)

Clinical Chemistry

Cytology

Molecular Immunology

Diagnostic Bacteriology

Serology

Food & Water Microbiology

Environmental Health Laboratory



Also responsible for QA at the Regional hospital and health centre labs and rapid HIV testing sites across the island

EQA PROGRAMMES

- Oversee several EQA programmes
- HIV & STI Related:
 - **OneWorld Accuracy PT Programme**
 - HIV
 - CD4

} NPHL, NBTS & 5 larger Regional Hospital Labs

 - VDRL, & TP-PA (NPHL & NBTS only)
 - Hepatitis B (NPHL & NBTS only)
 - Herpes (NPHL only) – Part of the TORCH panel
 - Gonorrhoea – Part of the Bacterial Identification and Genital Culture panels) (NPHL, SABH, CRH, MRH)
 - **CDC PT Programmes (3)** – Syphilis, Early Infant Diagnosis (DBS), Viral Load (NPHL & CRH Lab)
 - **NML (Public Health Agency of Canada)** - VDRL, & TP-PA (NPHL only)
 - **QASI CD4 (Lymphocyte Enumeration)** - 20 testing sites participating
 - **CDC-sponsored DTS Rapid HIV Testing** (53 participating sites)
 - Includes hospital and health centre laboratories, NGOs, etc. from all across the island
 - 100% coordinated by the National Laboratory Services QA Department (a.k.a Me!)



WHAT IS EQA?

- Stands for External Quality Assessment
- 2 main types:
- **Proficiency Testing (PT)**
 - Samples from an external provider with the results known only to them
 - Labs test and submit their results which are compared to the expected range/result and against other laboratories using similar equipment and reagents
- **Interlaboratory Comparison Programme**
 - 2 or more labs using the same or similar methods test the same samples under predefined conditions and their results are compared
- Both methods are vital tools for assessing lab competence and validating measurement methods to ensure adherence to international standards

DTS RAPID HIV PT PROGRAMME

1. PREPARATION OF SAMPLE PANELS

- Determine sample order and PT code
- Prepare accompanying documents – Instructions Sheet and Results Submission Sheet
- Prepare slips for packages and labels for each sample

[illegible]

Site	Code
South-East Regional Health Authority (SERHA)	
Comprehensive Health Centre	SE01
Kingston Public Hospital	SE02
Spanish Town Hospital	SE03
St. Jago Park H/C	SE04
Linstead H/C	SE05
Greater Portmore H/C	SE06
Old Harbour H/C	SE07
Bustamante Hospital for Children	SE08
Princess Margaret Hospital	SE09
Windward Road H/C	SE10
Maxfield Park H/C	SE11
Duhaney Park H/C	SE12
Edna Manley H/C	SE13
Jamaica Defense Force	SE14
Jamaica Constabulary Force	SE15
JASL Kingston	SE16
CHARES	SE17
Emergency Laboratory	SE18
Linstead Hospital	SE19
NPHL	REFLAB01
NBTS Laboratory	NBTS01



SAMPLE PANEL PREPARATION

Each package contains:

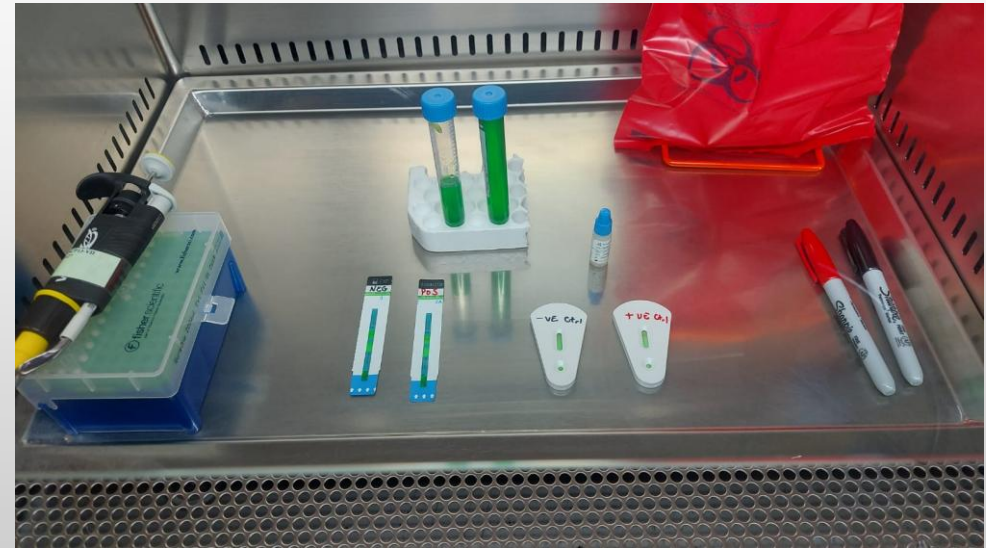
- 6 samples (dried tube samples)
- 1 tube of PBS buffer (diluent)
- Instructions for testing and submitting results
- Sample Results Sheet
- PT Code Slip
- Site Name and Site Code slip



QC CHECKS

Rigorous QC checks are done:

- Blind panels are tested by the reference laboratory on the Abbott Architect and by the Blood Bank Laboratory on the Abbott Alinity I
- Random panels are tested using the Determine and UniGold test kits



HIV DEPARTMENT



EMERGENCY LABORATORY



Rapid HIV Testing



CD4 testing on the PIMA analyzer

ANALYSIS OF RESULTS

MINISTRY OF HEALTH JAMAICA
NATIONAL HIV PROFICIENCY TESTING PROGRAMME
DTS Results Reporting Form

Testing Site type (circle) VCT PMTCT Lab Other.....

Site Name: Princess Margaret Hospital

PT Code: 2024U

Site ID: SE09 Date Panel Received: 11/12/2024

Analyst Name: Misana Phillips-Saunders Date Panel Reconstituted: 18/12/2024

Analyst Title: Laboratory Technician Date Panel Tested: 18/12/2024

Test Method ELISA RAPID
(Circle or tick method)

Test Name	Test 1	Test 2
Kit Lot No.	<u>2301737</u>	<u>2301737</u>
Expiration Date	<u>02/25/24</u>	<u>02/25/24</u>
PT Panel ID	<u>U1-U6</u>	<u>U1-U6</u>

	Test 1 Results			Test 2 Results			Final Status			Comment
QC Neg	<u>NR</u>	<u>R</u>	<u>INV</u>	<u>NR</u>	<u>R</u>	<u>INV</u>	<u>NEG</u>	<u>POS</u>	<u>INC</u>	
QC Pos	<u>NR</u>	<u>R</u>	<u>INV</u>	<u>NR</u>	<u>R</u>	<u>INV</u>	<u>NEG</u>	<u>POS</u>	<u>INC</u>	
1	<u>NR</u>	<u>R</u>	<u>INV</u>	<u>NR</u>	<u>R</u>	<u>INV</u>	<u>NEG</u>	<u>POS</u>	<u>INC</u>	
2	<u>NR</u>	<u>R</u>	<u>INV</u>	<u>NR</u>	<u>R</u>	<u>INV</u>	<u>NEG</u>	<u>POS</u>	<u>INC</u>	
3	<u>NR</u>	<u>R</u>	<u>INV</u>	<u>NR</u>	<u>R</u>	<u>INV</u>	<u>NEG</u>	<u>POS</u>	<u>INC</u>	
4	<u>NR</u>	<u>R</u>	<u>INV</u>	<u>NR</u>	<u>R</u>	<u>INV</u>	<u>NEG</u>	<u>POS</u>	<u>INC</u>	
5	<u>NR</u>	<u>R</u>	<u>INV</u>	<u>NR</u>	<u>R</u>	<u>INV</u>	<u>NEG</u>	<u>POS</u>	<u>INC</u>	
6	<u>NR</u>	<u>R</u>	<u>INV</u>	<u>NR</u>	<u>R</u>	<u>INV</u>	<u>NEG</u>	<u>POS</u>	<u>INC</u>	

NR = Non-Reactive R = Reactive INV = Invalid NEG = Negative POS = Positive INC = Inconclusive

Analyst Signature M. Saunders Date 18/12/24

Site Supervisor R. Bennett Date 18/12/24

Please return your results the Quality Assurance Unit Due Date: 31/12/2024

FT-080-116
 National Laboratory Services
 Quality Assurance 2014/05/29 Edition 1

Results are submitted by bearer, fax, email or Whatsapp to the QA Coordinator

10% - Documentation score

(All required information filled out, determination of final status, i.e. positive, negative, indeterminate, etc.)

90% - Technical score

(Testing controls correctly, following the national algorithm)

ANALYSIS OF RESULTS

Performance Reports are prepared for each site.

Recommendations for corrective actions are included.

National Laboratory Services
Jamaica DTS Proficiency



DRIED TUBE SPECIMEN PERFORMANCE REPORT

Laboratory Results Summary

Laboratory	Laboratory ID	Test Event	Programme	Results deadline	Next Event Date
Mandeville Comprehensive Clinic (MCC)	SR05	2 of 2	Dried Tube Specimen	November 5, 2023	April 2024

Anti- HIV-1/2

PT Name	Your Result	Problem Code	Acceptable Results	All Labs	Documentation Score (%)	Test score	Final score
S1	NEG		NEG	S1	100%	75%	87.5%
S2	POS		POS	S1			
S3	NEG		NEG	S1			
S4	NEG		NEG	S1			
S5	POS		POS	S1			
S6	NEG		NEG	S1			

Anti HIV 1 /2:
This result is designated for Regulatory purposes

Overall Grade: **87.5% UNACC**

Problem code: A = No reagent
B = Failure to participate
C = Analyzer out of service

Grade: ACC – Acceptable
UNACC – Unacceptable



Recommended Corrective Actions:

- Always** run the positive and negative control on both test kits prior to testing patient or PT samples. This provides assurance that the kits are functioning optimally.

FT-080-137
National Laboratory Services
Quality Assurance
2015/03/17
Edition 1

WorkClient Course: Shipping In... Sign Out WHO eLearning Pla... www.pnc.org/jmr/f... Facebook Communities Basic Bionik Manag... SurveyMonkey - M...

ePT Admin Dashboard Configure Manage Analyze Reports Logout

Comment for all Participants of this shipment: No comment specified

Download Summary Report Download All Reports

10 records per page Search:

Participant/Tester ID	Participant/Tester	Country	Response Score	Documentation Score	Result	Response Status	Responded On
NBT01	NBTS Laboratory	Jamaica	90.00	10.00	Pass	Responded	30-Dec-2024
NE01	St. Anns Bay Hospital	Jamaica	90.00	10.00	Pass	Responded	30-Dec-2024
NE02	SAB H/C	Jamaica	90.00	10.00	Pass	Responded	27-Dec-2024
NE03	Pt. Antonio Hospital	Jamaica	90.00	10.00	Pass	Responded	18-Dec-2024
NE04	PAH Department	Jamaica	90.00	10.00	Pass	Responded	18-Dec-2024
NE05	Port Maria Hospital	Jamaica	90.00	10.00	Pass	Responded	30-Dec-2024

analysis.docx STHL Gap Analysis.docx IMG-20250909-W...jpg IMG-20250909-W...jpg IMG-20250914-W...jpg Review_HBA1c.doc

ANALYSIS OF RESULTS

DTS RAPID HIV (In-House PT from NPHL)				
Site	Code	Test Event 1	Test Event 2	Comment
South-East Regional Health Authority (SERHA)				
Comprehensive Health Centre	SE01	100	100	
Kingston Public Hospital	SE02	100	100	
Spanish Town Hospital	SE03	98	100	
St. Jago Park H/C	SE04	100	100	
Linstead H/C	SE05	100	100	
Greater Portmore H/C	SE06	100	100	
Old Harbour H/C	SE07	98.8	100	
Eustamante Hospital for Children	SE08	100	100	
Princess Margaret Hospital	SE09	100	100	
Windward Road H/C	SE10	100	100	
Maxfield Park H/C	SE11	100	100	
Dubanev Park H/C	SE12	100	100	
Edna Manley H/C	SE13	100	100	
Jamaica Defense Force	SE14	98.8	100	
Jamaica Constabulary Force	SE15	13.8	0	Test: Testing done by trainees, test: Apparent error with the kit used. Did not report any positives incl. the control.
JASL Kingston	SE16	100	100	
CHARES	SE17	98.8	100	
Emergency Laboratory	SE18	98.8	100	
Linstead Hospital	SE19	100	100	
NPHL	REFLAB01	100	100	
NBTS	NBTS01	98	100	
Southern Regional Health Authority (SRHA)				
Mandeville Regional Hospital	SR01	98.8	80	
May Pen Hospital	SR02	100	100	
Black River Hospital	SR03	96.7	100	
Percy Junior Hospital	SR04	98.8	100	
Santa Cruz H/C	SR05	98.8	100	
Mandeville H/C	SR06	100	87.5	
May Pen H/C	SR07	97.9	100	
Western Regional Health Authority (WRHA)				
Cornwall Regional Hospital	WR01	100	100	
Mohay Type 5	WR02	100	100	
Savanna-La-Mar Hospital	WR03	100	100	
Site	Code	Test Event 1	Test Event 2	Comment
Noel Holmes Hospital	WR04	100	100	
Falmouth Hospital	WR05	100	100	
Cambridge H/C	WR06	100	100	
Savanna-La-Mar Type 5	WR07	100	100	
Negril H/C	WR08	100	100	
Hopewell H/C	WR09	100	100	
Chester Castle H/C	WR10	100	100	
JASL Montego Bay	WR11	100	97	
North-East Regional Health Authority (NERHA)				
St. Ann's Bay Hospital	NE01	100	100	
SAB H/C	NE02	100	100	
Pt. Antonio Hospital	NE03	100	80	
PAH Department	NE04	100	100	
Port Maria Hospital	NE05	100	100	
Annotto Bay Hospital	NE06	98.8	100	
Ochoa Rios H/C	NE07	100	100	
Annotto Bay H/C	NE08	97.9	100	
JAS St. Ann (NGO)	NE09	98.8	100	
Beth Jacobs (NGO)	NE10	100	100	
Alexandria Community Hospital (H/C)	NE11	100	100	
Highgate H/C	NE12	98.8	100	

Results for all PT programmes are included in monthly and annual reports.

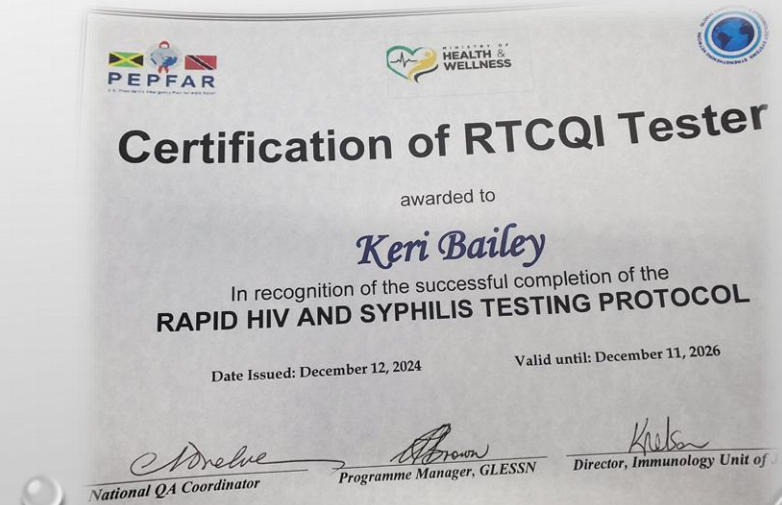
Colour-coded so at a glance, the QA “team” can pin-point where to focus on for implementation of corrective actions – retraining, etc.

ENSURING QUALITY

- Train-the-trainers workshops

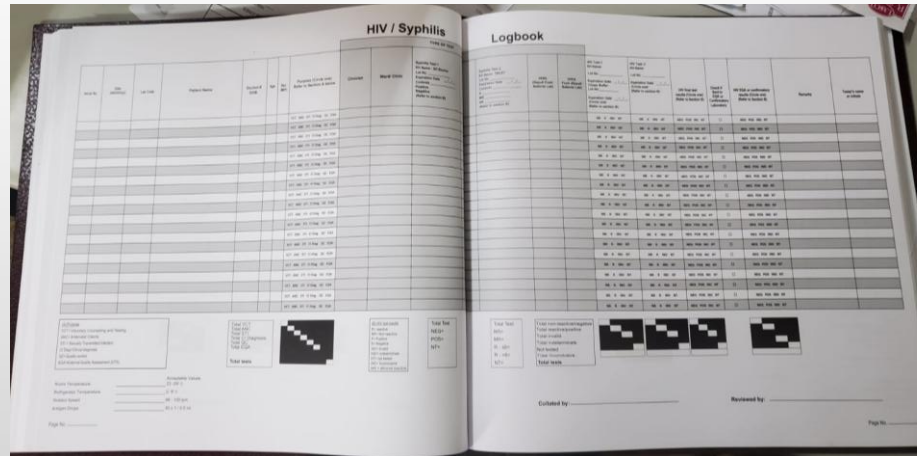
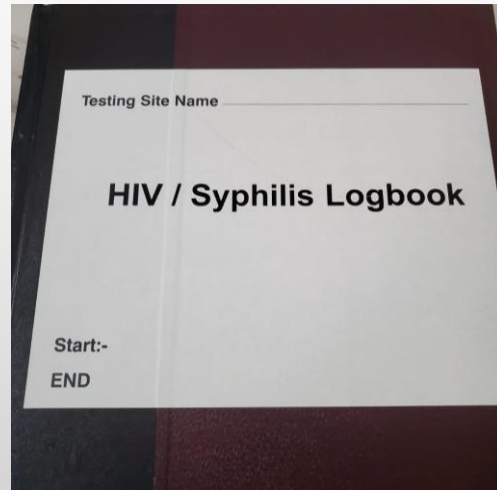


- Training of testers



INTERVENTIONS TO ENSURE QUALITY

- Provision of log books to standardize documentation of patient information and test results at testing sites



- Sponsorship for reagents and supplies for the EQA programme (CDC)
- Test kits provided by the Ministry of Health & Wellness to prevent stock outs and ensure adherence to the national testing algorithm
- Regular Competency Assessments for all testers – done by the site supervisors
- Submission of 1:10 samples to NPHL for testing as an extra quality check (for both HIV and syphilis)
- Audits of test sites – look at documentation, safety, QC checks, etc. and witnessing

PERFORMANCE IN OTHER EQA PROGRAMMES

- **QASI Lymphocyte Enumeration (Public Health Agency Of Canada)**

- 20 sites across the island (Hospital labs, Health Centres, NGOs)
- Excellent track record in performance

- Test in the field
- Submit results sheets
- Review of results
- Upload results to website
- Download and review reports
- Email back to sites with suggestions for corrective action where necessary

QASI LYMPHOCYTE (CD ₄)				
Laboratory	Test	Test Event 1	Test Event 2	Comments
National Pub. Health Lab.	CD ₄	100%	100%	TE1: Proficient; TE2: Proficient
Pt. Antonio Health Centre	CD ₄	100%	100%	TE1: Proficient; TE2: Proficient
Black River Hospital Lab.	CD ₄	DNP	100%	TE1: Instrument out of service; TE2: Acceptable (Sample 2 1)
Mandeville Reg. Hosp. Lab.	CD ₄	100%	100%	TE1: Proficient; TE2: Proficient
St. Ann's Bay Hospital Lab.	CD ₄	100%	100%	TE1: Proficient; TE2: Proficient
Ja. AIDS Support for Life - Kingston	CD ₄	100%	DNP	TE1: Proficient; TE2: Instrument out of service
Ja. AIDS Support for Life – St. Ann	CD ₄	100%	100%	TE1: Proficient; TE2: Proficient
Sav-La-Mar Hosp. Lab.	CD ₄	100%	100%	TE1: Proficient; TE2: Proficient
Noel Holmes Hosp. Lab.	CD ₄	100%	100%	TE1: Proficient; TE2: Proficient
Falmouth Hospital Lab.	CD ₄	100%	100%	TE1: Acceptable (QC108†); TE2: Proficient
May Pen Hospital Lab.	CD ₄	100%	100%	TE1: Proficient; TE2: Proficient
Morant Bay Health Centre	CD ₄	100%	100%	TE1: Proficient; TE2: Proficient
Spanish Town Hospital Laboratory	CD ₄	100%	100%	TE1: ACCEPTABLE (Sample B†; TE2: Proficient
CHARES	CD ₄	100%	100%	T TE1: Proficient; TE2: Proficient
Cornwall Regional Hospital Laboratory	CD ₄	100%	100%	TE1: Proficient; TE2: Proficient
Mobay Type V Health Centre	CD ₄	100%	100%	TE1: Acceptable (QC109†); TE2: Proficient
Comprehensive Health Centre	CD ₄	100%	100%	TE1: Fail (QC109 result outside $\pm 3SD$); TE2: Proficient
Ja. AIDS Support for Life - Mobay	CD ₄	100%	100%	TE1: Proficient; TE2: Proficient
Emergency Laboratory - NPHL	CD ₄	100%	100%	TE1: Proficient; TE2: Proficient
Pt. Maria Health Centre	CD ₄	100%	--	TE1: Proficient; TE2: Analyzer gave XXX readings for both samples

PERFORMANCE IN OTHER EQA PROGRAMMES

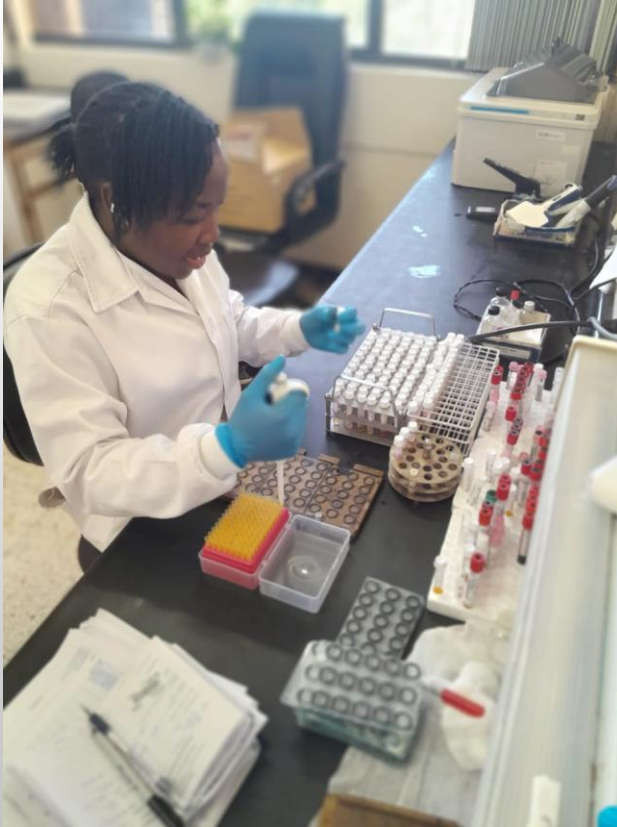
OneWorld Accuracy PT Programme

OneWorld Accuracy					
LABORATORY	Test/Panel	Test Event 1	Test Event 2	Test Event 3	Comments
National Public Health Laboratory					
Core Immunology	Hepatitis	100%	100%	100%	
Serology	Syphilis (VDRL&TP-PA)	100%	100%	100%	
Molecular Immunology	CD4	DNP	DNP	100%	TE1&2: No panels received
"	HIV Drug Resistance Testing	DNP	DNP	DNP	Testing suspended.
HIV	HIV	100%	100%	100%	
NBTS Laboratory	Hepatitis	100%	100%	100%	
"	HIV	100%	100%	100%	
"	Syphilis (VDRL)	100%	100%	100%	
St. Ann's Bay Hospital Laboratory					
HIV	HIV	100%	100%	100%	
Immunology	CD4	100%	100%	100%	
Spanish Town Hospital Laboratory					
HIV	HIV	100%	100%	100%	
Cornwall Regional Hospital Laboratory					
HIV	HIV	100%	100%	60%	TE3: Failed sample D&E
Immunology	CD4	100%	100%	100%	
Mandeville Regional Hospital Laboratory					
HIV	HIV	80%	80%	80%	TE1: Missed a +ve; TE2: Missed a +ve; TE3: Missed a +ve
Immunology	CD4	100%	100%	100%	
UWI Hospital Laboratory					
HIV	HIV	100%	100%	100%	



CORE IMMUNOLOGY – Hepatitis and Herpes Testing

SEROLOGY DEPARTMENT – Syphilis Testing



VDRL testing



TP-PA testing

1:10 QC samples are submitted by the testing sites for additional QC checks

PERFORMANCE IN OTHER EQA PROGRAMMES

- CDC SYPHILIS, EID (DBS), & VIRAL LOAD PROGRAMMES

CDC Syphilis Serology					
Department	Test	Test Event 1	Test Event 2	Test Event 3	Comments
Serology Department	VDRL	100%	100%	100%	
"	TP-PA	100%	100%	100%	
NML Syphilis Serology (Public Health Agency of Canada)					
Serology Department	VDRL	100%	100%		
"	TP-PA	100%	100%		



CDC Viral Load PT				
Department	Test	Test Event 1	Test Event 2	Comments
Molecular Immunology	Viral Load	100%	100%	
CDC Dried Blood Spot (Early Infant Diagnosis)				
Department	Test	Test Event 1	Test Event 2	Comments
Molecular Immunology	DBS	100%	100%	

MOLECULAR IMMUNOLOGY DEPARTMENT



Tests Performed:

- CD4
- Early Infant Diagnosis (HIV I/II)
- Viral Load (Recently started at CRH in Montego Bay)

Cobas 6800
Cobas 5800
Roche CyFlow
PIMA
FACSLytic*

Currently doing the majority of the testing for a national Human Papilloma Virus (HPV) project supported by the CRH Lab that recently acquired a Cobas 5800 analyzer

ISSUES FACED

RAPID HIV PT PROGRAMME

- Few sites do not follow the national testing algorithm
- Issues with procurement of test kits now
 - Validating new kits (More options)
- Additional staff needed for the QA Department
 - e-PT platform being developed
- Hoping to provide panels for individual testers at all the participating sites

Rapid Syphilis Testing

- Done widely across Jamaica
- Currently no EQA programme
- Additional personnel needed for implementation

Viral Load Testing

- MOHW currently looking to decentralize Viral Load testing
 - New testing sites will have to be enrolled in an EQA programme
 - Start with an ILC programme

CD4 Testing

- Manufacturer discontinuing the FACsPresto and PIMA analyzers
 - Phasing out the manufacturing of the reagents/kits
- Currently validating a new instrument to replace the BD instruments while we await the procurement of the FACsLyric analyzers

The Life of a QA Coordinator...

When you think it's going well...



...something always goes wrong



On behalf of
the team...

THANK YOU