

Quicker, Better, Faster

Optimising Turn Around Time of Laboratory Results

Pranitha Ramchuran
Regulatory Compliance Manager
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Outline

- Organogram
- Turn around time (TATs) for lab results
 - On-Site Testing
 - Outsourced Testing
 - Rationale for Selection of Outsourced Laboratories
 - CLS and BARC TATs
- Clinic Flow of Results
- Challenges and Resolutions

LABORATORY ORGANOGRAM

PI/ Research Clinician:
Sinead Delany-Moretlwe

Investigator of Record
Thesla Palanee

WRHI Laboratory Manager:
Mandla Mlotshwa (Back Up)

Research Clinician
Modulakgotla Sebe; Nina Von Knorring;
Kgomotso Morakane Ramasodi;
Ogheneruemu Vincent Okwuolise

Regulatory Compliance
Manager:
Pranitha Ramchuran

Medical Technologist:
Lindelwa Nkangane (LN)

Medical Technologist:
Nomfundo Maduna (Back Up)

Research Nurses:
Angel Nyathi (ATN)
Nkgolo Gegana (NMG)
Aloysia Makau (AM)
Xolelwa Matikinca (XJM)
Christine Mapule
Maruma (CMM)



Clinical Quality
Improvement
Mentor (CQIM):
Lebogang Modise (CLM)
Busi Mnguni (BM)



Colour Key:

- HIV, Vaginal pH; TV; BV
- Preg, Urine Dipstick, Wet Mount, Internal QC

On-Site Laboratory Testing

Laboratory Specimens and Testing

Urine

SDA:
GC/CT ⇔ BARC
(Separation – 5ml)

Pregnancy Testing:
Quidel QuickVue

Urinalysis:
Bayer Uristix 4/
Multistix 9

Blood



HIV Serology:
Abbot Determine
OraSure OraQuick
Unigold Recombigen



Genital

Vaginal pH
Machery-Nagel

Vaginal Gram Stain
Vaginal Swab
Endocervical Swab
⇔ MTN Network Lab

Rapid TV; BV
OSOM Trichomonas
BV Blue

KOH Wet Mount



Rationale for Selection of Outsourced Laboratories

- Service providers identified
 - CLS, BARC (Jhb/Dbn), MRC Central Laboratory (Dbn)
- Technical protocols developed
 - Past experiences
 - Quickest TATs
 - Financial Penalty Clauses implemented
- Bioanalytical Research Corporation (BARC):
 - GC/CT
 - Quicker TAT than MRC Central Laboratory (Dbn)
 - (3-4 days vs 5 days)
 - Pap Smear:
 - Quicker TAT than CLS
 - 3 days vs 24 hours
 - Change from conventional smear to liquid based cytology
 - More sensitive
 - Reduces call back of ppts due to inadequate pap smears
 - Reduce time between Scr 1 and Scr 2



MTN 003 Outsourced Laboratory Testing



Laboratory Specimens and Testing



Serology:
HBsAg
HBsAb
HIV Western Blot

Haematology:
FBC

Chemistry:
AST; ALT;
Phosphorous;
Creatinine

Flow Cytometry:
CD4+ T-cells

PCR:
Viral Load


Plasma Archive

Storage:
Vaginal Gram Stain
Vaginal Swab
Endocervical Swab
⇒ MTN Network Lab



Urine:
SDA: GC/CT

Pap Smear:
BD Surepath

Discipline	Test	Turn around time (TAT)	Lab Performing the Assay	Back-up Lab
Serology	HBsAg HBsAb	2 working days	CLS Jhb	National Health Laboratory Services (NHLS)
	Syphilis	3 working days	CLS Jhb	NHLS Jhb
	HIV Western Blot	5 working days	National Institute of Communicable Diseases (NICD)	NHLS Jhb
Haematology	Full Blood Count	48 hours	CLS Jhb	NHLS Jhb
Chemistry	AST; ALT; Phosphorous; Creatinine	24 hours	CLS Jhb	NHLS Jhb
PCR	Viral Load	5 working days	NHLS Jhb	NHLS Jhb
Flow Cytometry	CD4+ T-cells	24 hours-weekdays 72 hours-weekends and public holidays	NHLS Jhb 	NHLS Jhb



Global Central Laboratory

Discipline	Test	Turn Around Time (TAT)	Lab Performing Assay	Back-up Lab
Molecular Biology	SDA – GC/CT	3-4 days	BARC KZN	Lancet Jhb
Cytology	Pap Smear (BD Surepath – Liquid based cytology)	24 hours	Lancet Cytology Jhb	BARC In-house Multiple back-ups

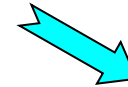
Outsourced Testing

- Visit-specific sample requisition forms
 - Volumes
 - If indicated samples
- Urgent Samples requiring testing
 - Use of “URGENT” stickers
 - Phone calls and emails to CLS/BARC
 - Accrual Phase: Urgent Screening Samples
 - Follow-up Phase:
 - AE Follow-up
 - Seroconverter Samples
- Communication with CLS and BARC
 - Equipment and Consumable related delays



Flow of Laboratory Results

QC of Requisition form



Shipping of samples

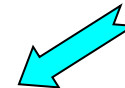


Receipt and QC of Results



QUALITY CONTROL

Generation of DCFs



Clinical Review and Management



Challenges: Staff Capacity

- One Clinician
 - Transcription delays
 - High freq of DCFs

- Additional clinicians employed
 - Med Tech employed
- QC systems improved
 - Requisition forms
 - Lab Result Reports
 - Shipping Logs
 - DCF Resolution within 24 hours



Acknowledgements

□ Lab and Clinical Team at





*Thank
You*