

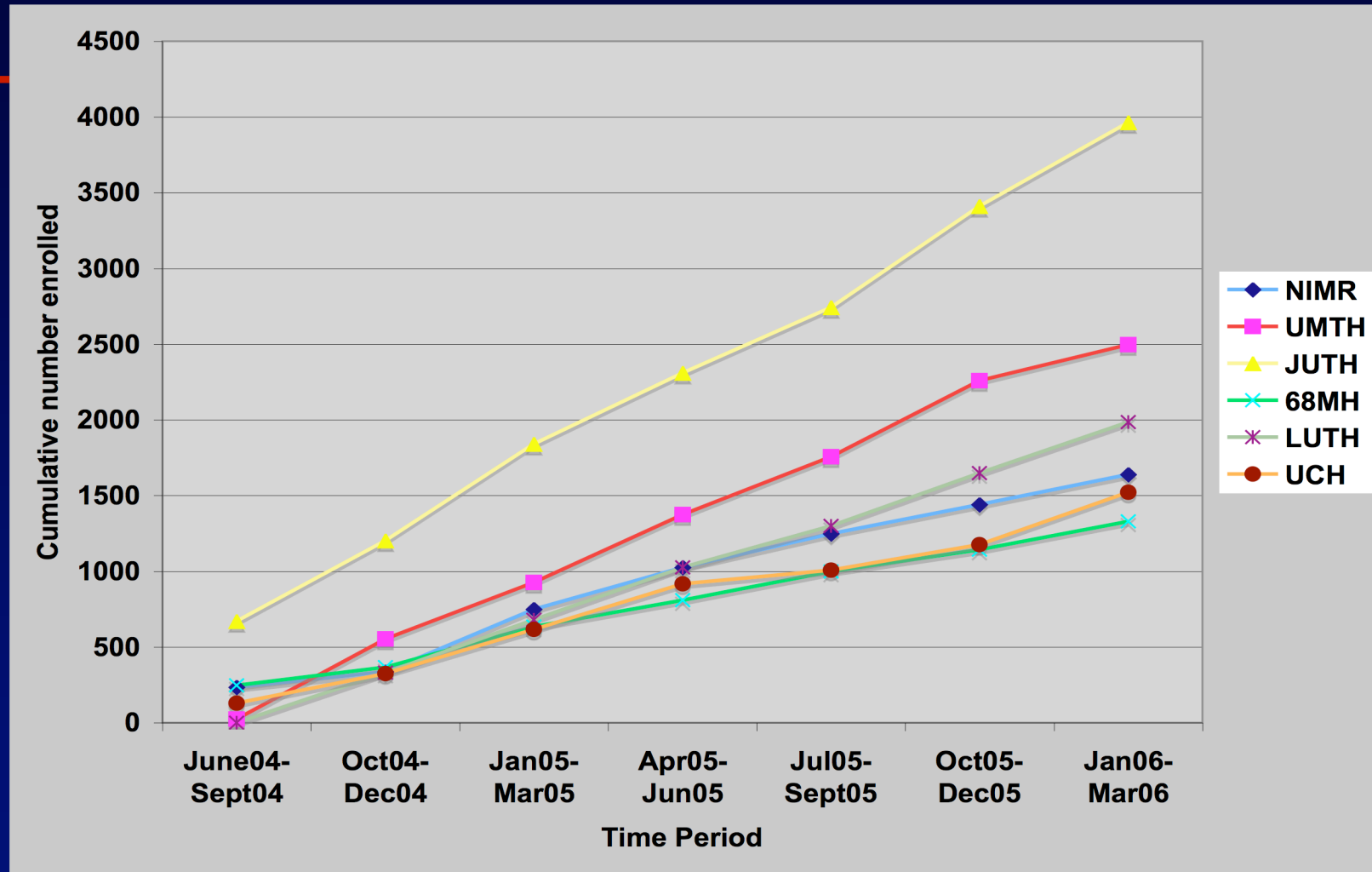
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**Harvard PEPFAR, Nigeria**  
**Laboratory QA issues**

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**National Clinical Coordinator**  
**Harvard PEPFAR**  
**Nigeria**



# Patients- ART

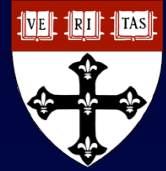




AIDS PREVENTION  
INITIATIVE NIGERIA

# Harvard PEPFAR Nigeria

## Laboratory Capacity Building



- HIV: ELISA, rapid tests, Western-Blot
- Syphilis (TPHA/RPR)
- Genital samples/Urine
  - *N. gonorrhoeae*
  - *Candida* spp.
  - *C. trachomatis*
  - *T. vaginalis*
  - Bacterial vaginosis
- CD4/CD8 counts
- Viral load and PCR Dx
- *Viral genotyping (Harvard)*



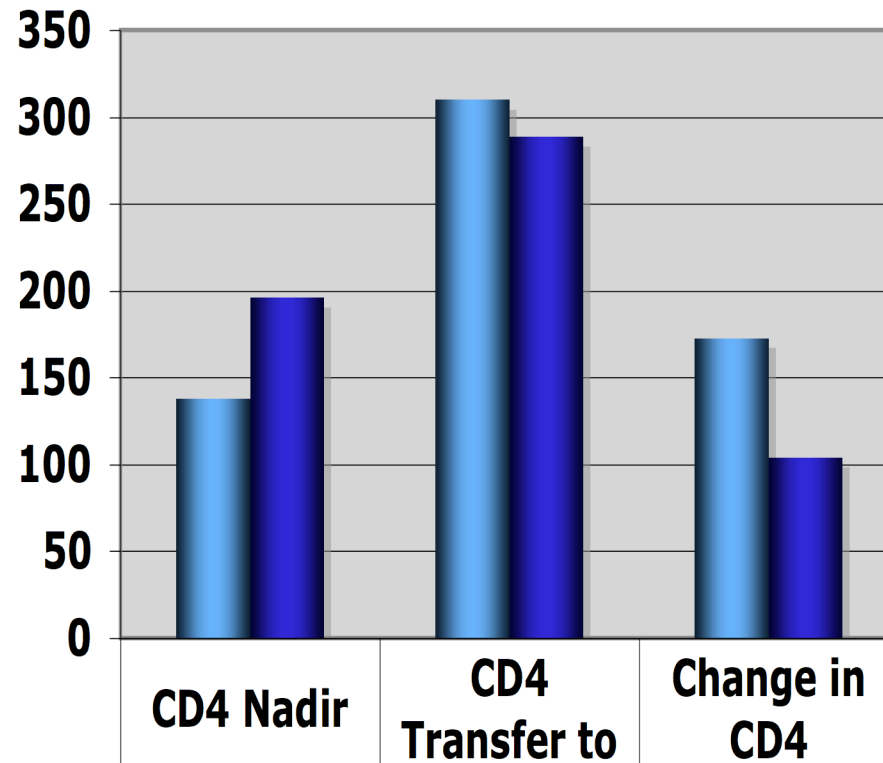
UCH



JUTH

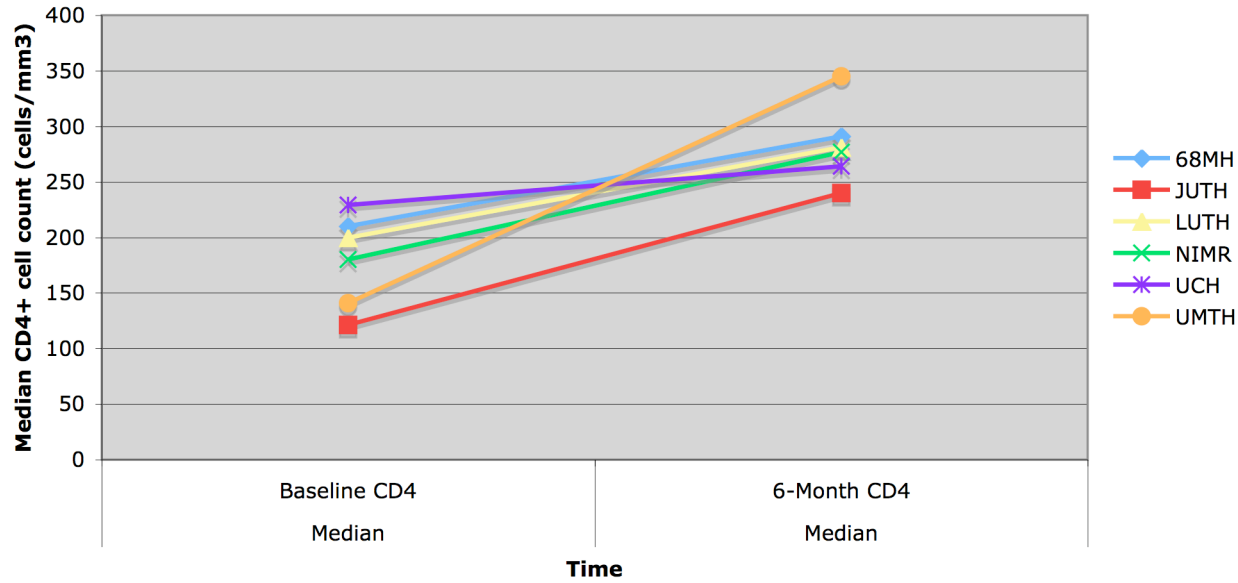


## Government patients - Jos University Teaching Hospital

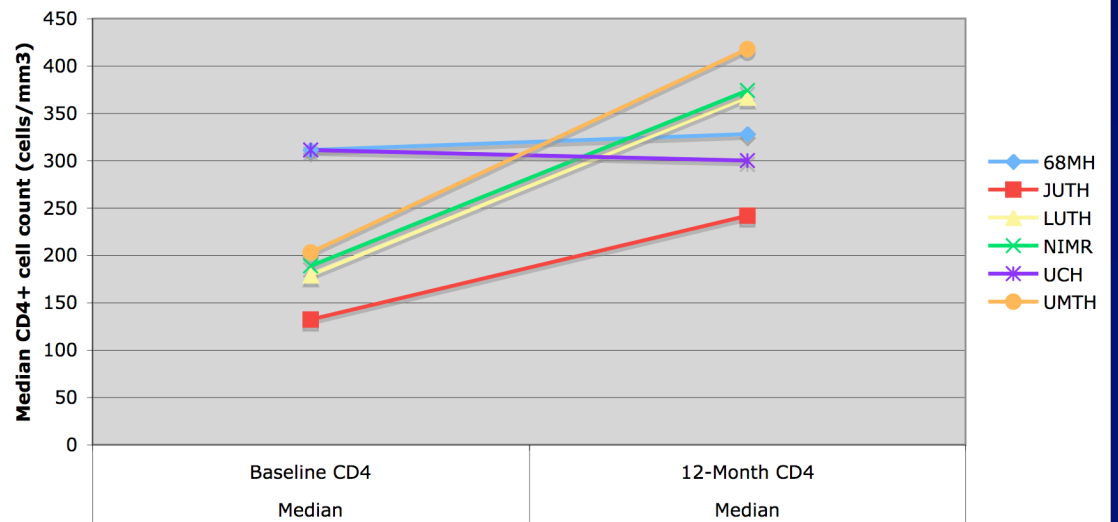


■ 6 month ART	137.47	309.86	172.38
■ 12 months ART	196.04	288.43	103.60

Change in CD4+ cell count - 6 months



Change in CD4+ cell count- 12 months



# Laboratory Infrastructure

*What is available?*

	HIV immunoblot	CBC	Chemistry	CD4-flow	Viral load	Infant PCR
<b>NIMR</b>	X	X	X	X	X	X
<b>68MH</b>	X	X	X	X	X	X
<b>LUTH</b>	X	X	X	X	X	X
<b>UCH</b>	X	X	X	X	X	X
<b>JUTH</b>	X	X	X	X	X	X
<b>UMTH</b>	X	X	X	X	X	X
<b>ABUTH</b>	X	X	X	X	ongoing	ongoing

■ Designated Federal training centers

All sites have and are using Cyflow for CD4

All sites have Roche Ampliclor 1.5 and Cobas

# Alternatives Available

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NAME	PROBLEMS	COMMENTS
Fascount	Scarce reagents	Gold standard, though
Dyna beads	Still semi manual, laborious	Fewer results/day
COBAS		Eliminates manual extraction problems
Primagen Retina <sup>TM</sup> Rainbow	High cost, more expensive than Roche Ampliclor	Good for dried blots. Useful for transport from rural/ distant centres to Lagos.
Cavidi	Laborious	Too few results, about 35 in one week. Maybe a good alternative to VL assay.  Phenotypic assay

# Laboratory Infrastructure- QA/QC

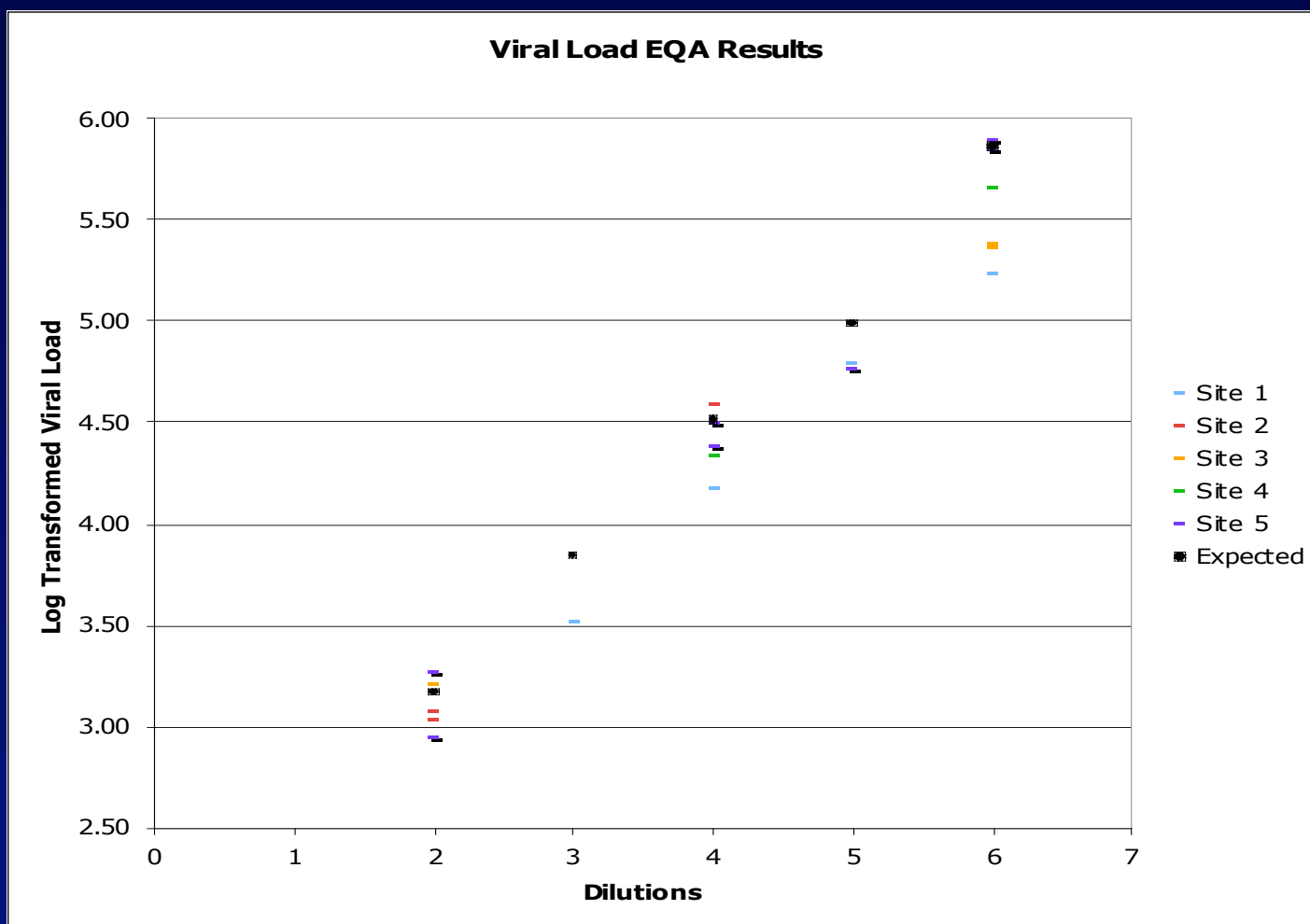
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	Lab Equipped	Training complete	Internal QA/QC	External QA/QC
HIV serology	X	X	X	CAP pending
CBC	X	X	X	Cross-site
Chemistry	X	X	X	Bio-Rad
CD4- flow	X	X	X	QASI/UK NEQAS
Viral Load	X	X	X	Harvard
Infant PCR	X	X	X	Harvard



# Harvard PEPFAR

## Viral Load EQA Results from five sites



# Issues on Quality Assurance I

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- Out of the three aspects of QA, greatest problem presently is proficiency testing owing to limitation of time and travel.
- The Nigerian Institute Medical Research lab is a WHO certified lab and coordinates proficiency testing to assess and ensure the capabilities of the other labs in the Harvard PEPFAR sites.
- Quality control is continuous and every staff sees it as his responsibility.

## Issues on Quality Assurance II

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- On Quality improvement, the components of each laboratory services are analysed continuously to improve their reliability, efficiency and utilisation. SOPs are available and staff on each bench are trained and retrained regularly. Problems are anticipated and where identified are corrected immediately and remedial actions taken.
- Point of care testing is clamored for but may have QA challenges.