

ASLM

AFRICAN SOCIETY FOR LABORATORY MEDICINE

ADVANCING THE LABORATORY PROFESSION AND NETWORKS IN AFRICA

Strengthening Laboratory Systems for HIV Differentiated Service Delivery

Anafi Mataka

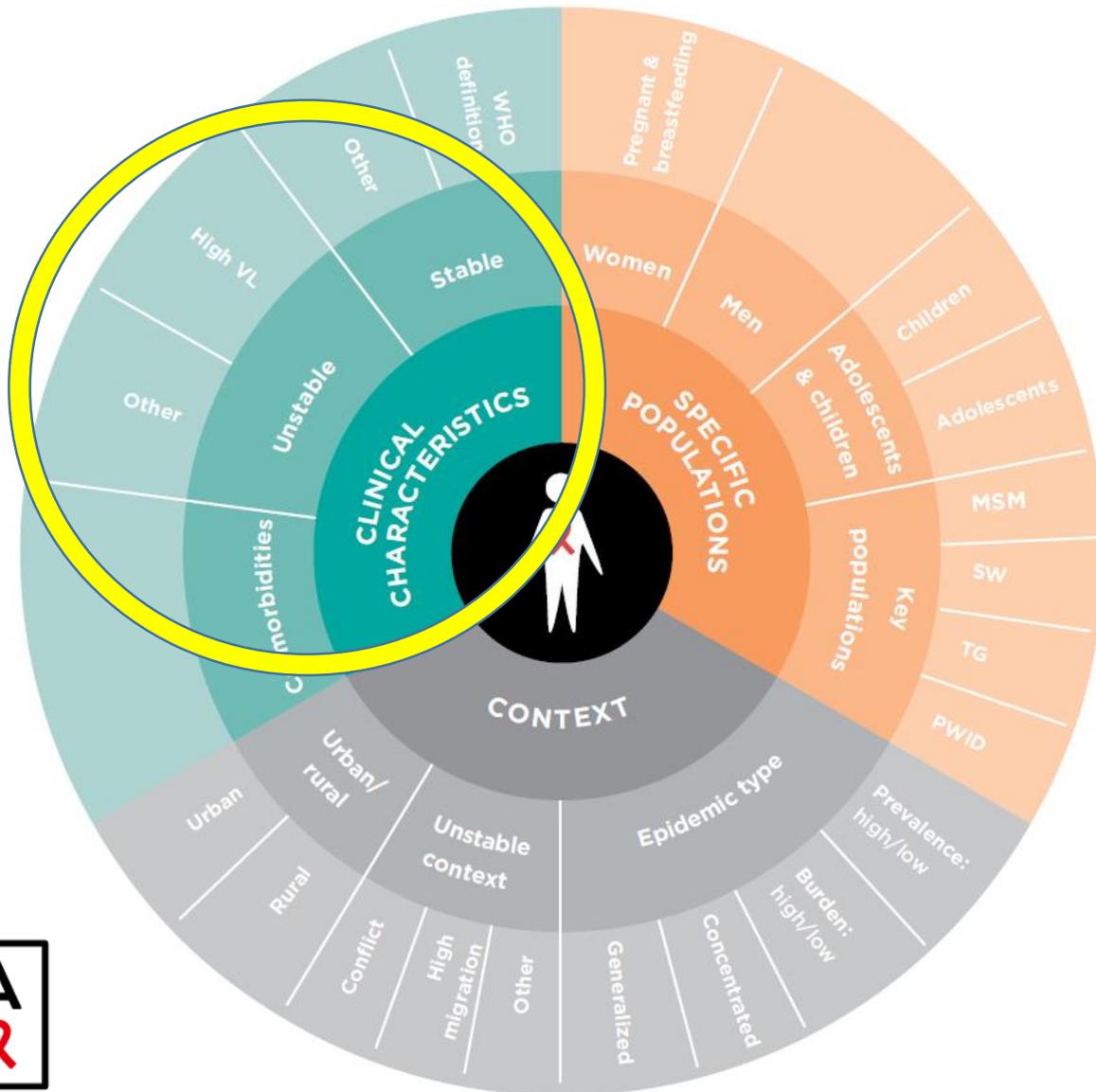
African Society for Laboratory Medicine

AIDS 2018

Outline

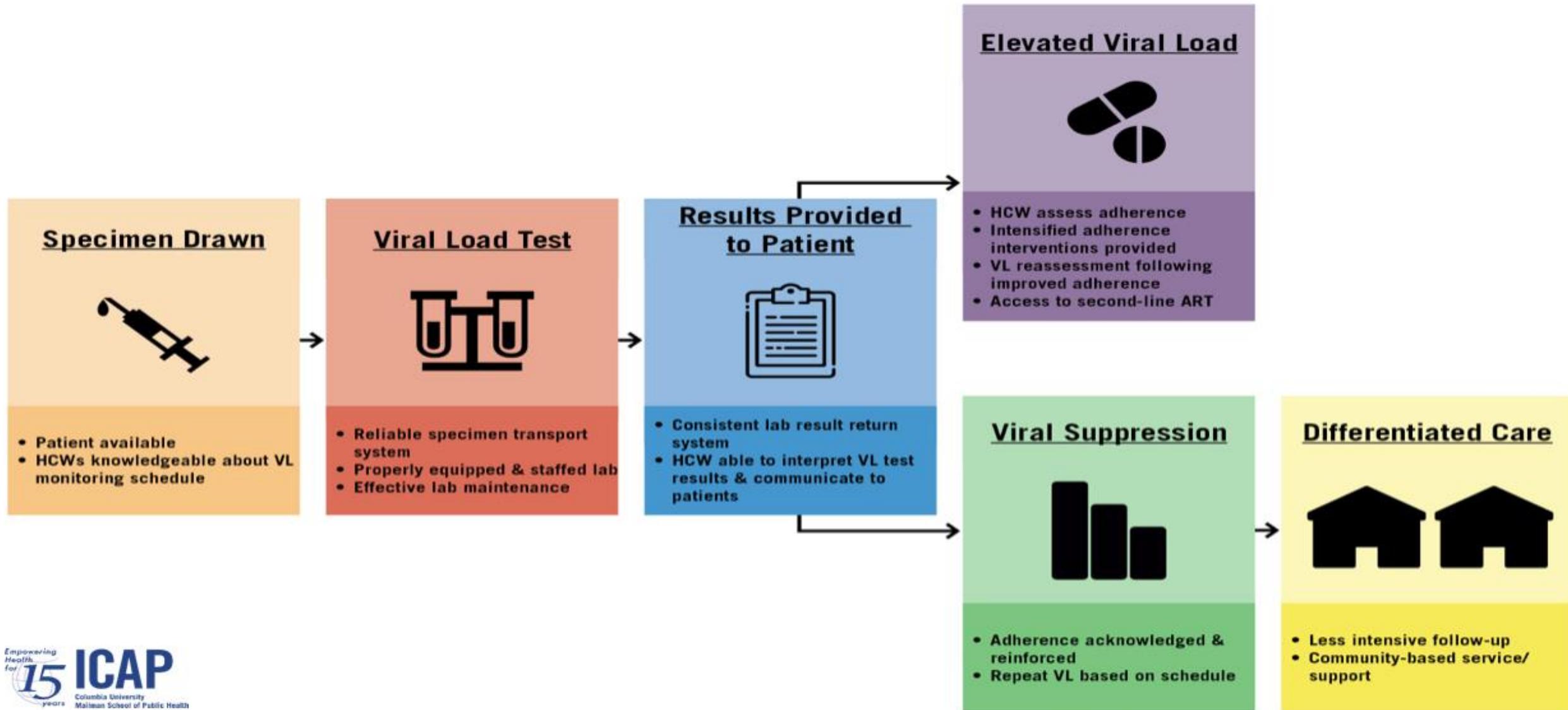
- The role of the laboratory in scaling up DSD
- Strengthening lab systems to improve the coverage and utilization of HIV viral load testing
- Introduction to the LabCop learning network

Lab testing is needed to “differentiate” patients



- Most DSD guidelines recommend viral load and/or CD4 testing to identify “stable” vs. “unstable” patients
- Other lab tests also critical:
 - CrAg
 - TB diagnostics
 - Biochemistry
 - Hematology
 - Bacteriology
 - Pregnancy test
 - Syphilis and other STIs

Viral Load testing is often the gateway to DSD for stable patients



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At country level: Viral Load testing coverage is not sufficient to achieve the 3rd 90

Scale-up of Viral Load testing in 7 PEPFAR-supported countries
Lecher et al. MMWR 2016

Countries	% gap between targets and actual needs	# of HIV patients in 2015	% increase of patient in 2016	% ART patients with ≥1 VL test	% VL test with Viral suppression
Côte d'Ivoire	36%	147,947	8%	11	66
Kenya	No gap	860,297	7%	49	84
Malawi	61%	595,186	2%	19	89
Namibia	No gap	143,805	3.5%	43	87
South Africa	No gap	3,318,384	3%	91	83
Tanzania	74%	758,344	1.5%	9	72
Uganda	33%	1,066,519	9%	22	92

...but some countries do better than the others.

At clinic level: access to VL does not always translate into improved switch practices

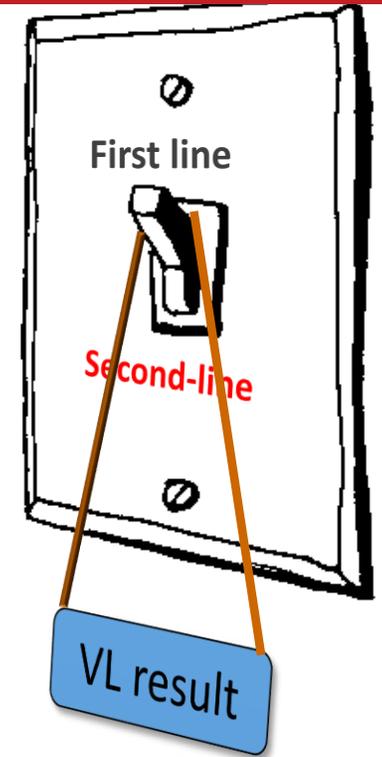


Aim: Compare the appropriateness and timeliness of switch to 2nd or 3rd line ART regimen, across clinics with **full/phasing in/no access to VL testing**

☐ 2420 patients with ≥ 2 VL results

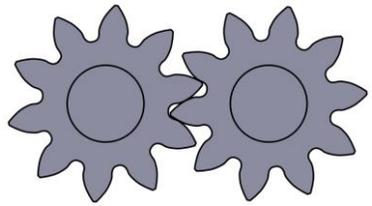
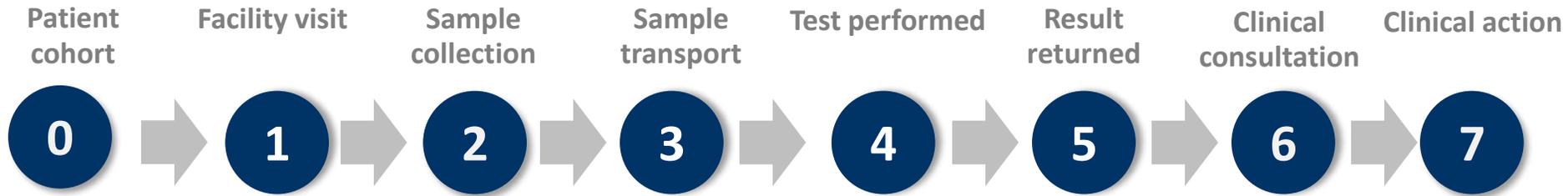


☐ 266 confirmed virological failures
(2 consecutive VL > 1000 RNA copies)



N=266	Full access to VL	Access to VL phasing in	No access to VL
Switch	61 (37%)	16 (25%)	14 (39%)
Same regimen	105 (63%)	48 (75%)	22 (61%)

Systems issues affecting the Viral Load testing cascades



Policy & regulation

Sample referral system

Q^{ty} management systems

Supply chain

Laboratory Clinic interface

Workforce

- Poor **demand** from patients and clinicians
- HIV care services are overloaded

- Lack of SOP
- Issues with sample conservation
- **Sample referral system** with
 - low coverage
 - no tracking system
- Long turn around time of sample transport

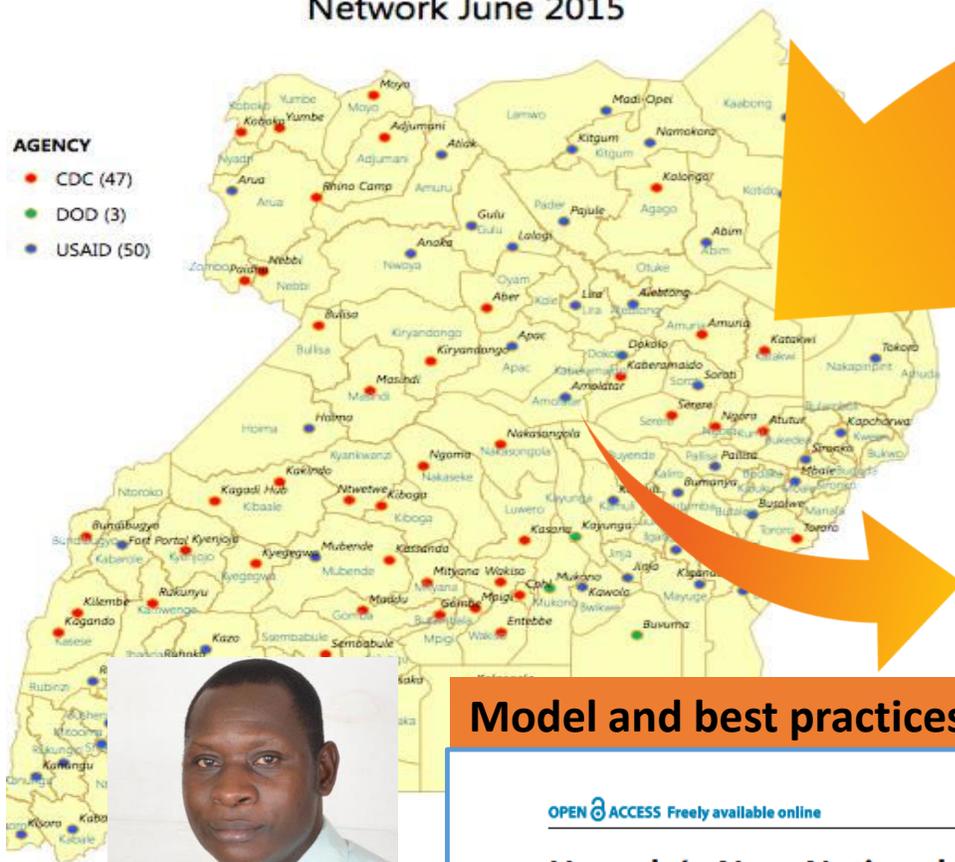
- Poorly optimized work flow
- Shortage of human resources
- Insufficient testing capacity
- Insufficient Quality
- Reagent stock out
- Equipment maintenance
- Long turn around time
- **Ineffective laboratory clinic interface**

- **Lack of or poor compliance to guidelines to use results**
- Lack of differentiated care models
- Stock out of ARVs

A good sample referral system increases the testing coverage of the laboratory network –

GIS-mapping of facilities and road network a 30 to 40km radius around the hub

National Specimen Referral and Transportation Network June 2015



100 hubs reaching 2500 to 3000 health facilities
~90% coverage
~62 % cost savings

Model and best practices exported to Sierra Leone



Charles Kiyaga | ASLM

OPEN ACCESS Freely available online



Uganda's New National Laboratory Sample Transport System: A Successful Model for Improving Access to Diagnostic Services for Early Infant HIV Diagnosis and Other Programs

Clinical Infectious Diseases
VIEWPOINTS



Combatting Global Infectious Diseases: A Network Effect of Specimen Referral Systems

Peter N. Fonjungo,¹ George A. Alemni,² Yewen Kebede,³ Alex Opio,⁴ Christina Mwangi,⁵ Thomas J. Spira,⁶ R. Suzanne Beard,¹ and John N. Nkengasong¹

Haiti ~182% ART Enrolment in 6 m
Fonjungo et al, 2017



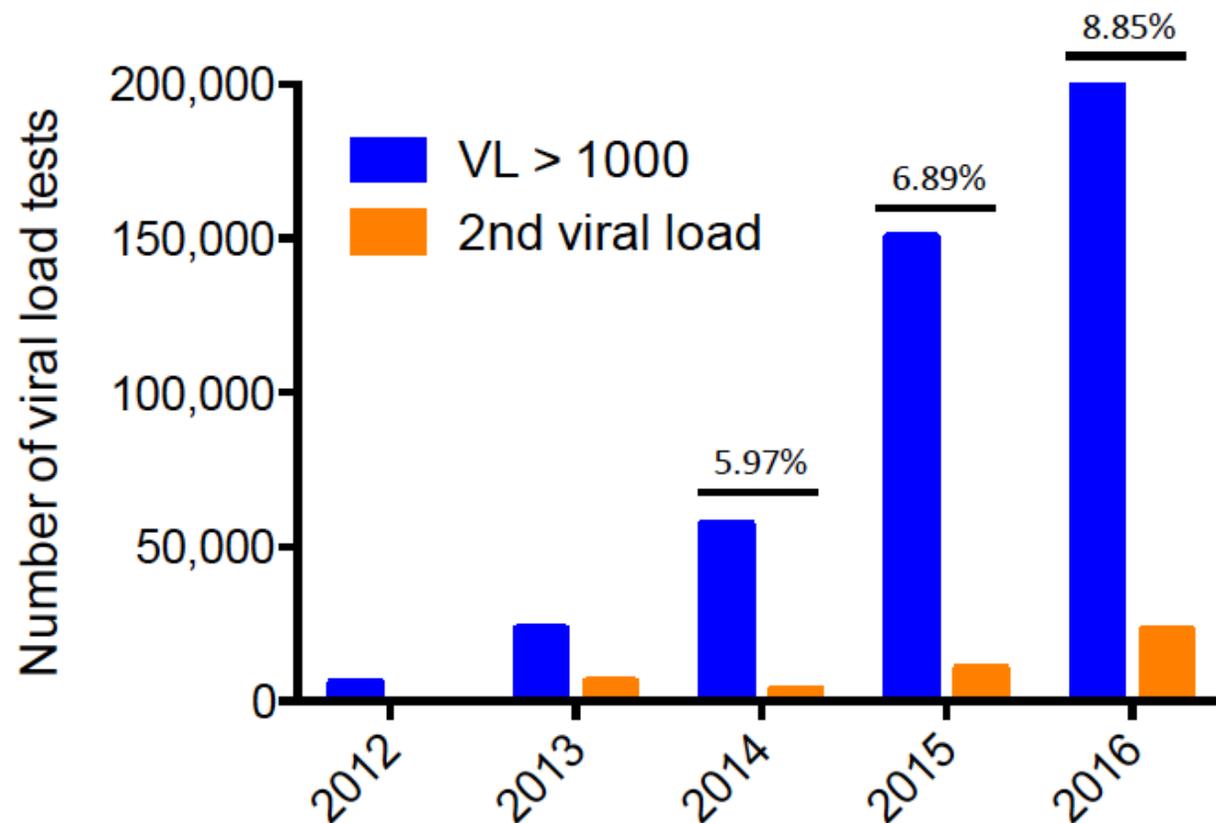
- Rider reaches each of the 20 to 30 health facilities under the hub catchment at least once a week,
- At each visit:
 - samples pick up
 - results drop off

Improving VL test results utilization

Approximately **50% of CD4 tests and EID tests** performed in SSA were never used [Peter *et al.* JIAS 2017]

Early warning signs for VL utilization:

- In a national review from Kenya: only **4.1% of patients** with unsuppressed VL (UVL) had a repeat VL test; only **1.6%** of these occurred within 4 months [Mwau *et al.* PLoS One 2017]
- In a retrospective cohort study in Mozambique, **35% of patients** with UVL had a repeat VL test [Swannet *et al.* Int Health 2017]



Lara Vojnov WHO. Regional Viral load meeting
October 2017

What are the barriers to VL utilization?

- Identifying unsuppressed Viral Load (UVL)
 - Systematically connecting results to patients – getting data into a chart or register
 - Flagging as an emergency
- Acting on the results
 - Identifying a responsible individual
 - Incentivizing urgent action
 - Contacting/recalling patients
- Supporting patient engagement
 - Counseling
 - Transportation support
 - Demand creation
 - Supporting patient engagement

What works?

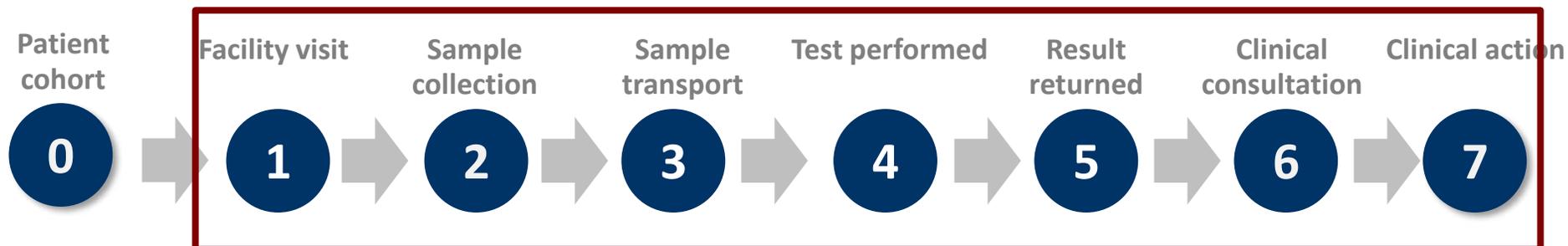
Experience from Quality Improvement interventions in Kenya

- VL focal persons / champions
- UVL management standard operating protocols (SOPs)
- Immediate (daily) review of VL results
- UVL registers
- Stickers on charts / color-coded files
- Standardized EAC strategies and tools
- Case managers



Point of care VL to simplify the VL testing cascade

Continuum of Care



By condensing into a **single visit**, POC has the potential to eliminate

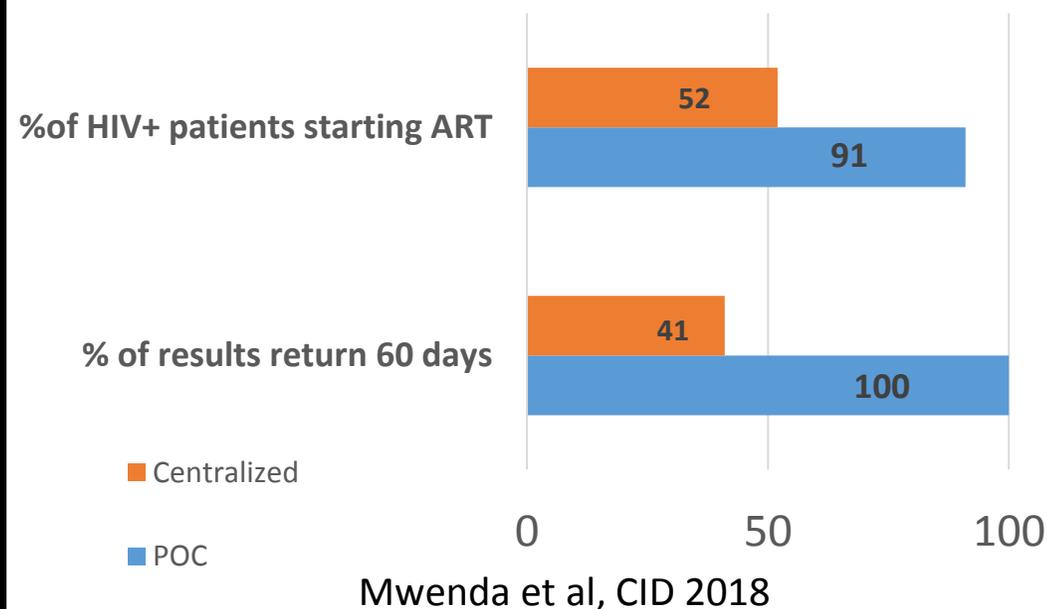
- Loss points between sample collection and test performed
- Loss points between tests performed and result return
- Loss points between result return and clinical action



DRW
Diagnostics for the Real World



Result return and ART initiation rate



Mitigating barriers to the uptake of POC technology: example of a UNITAID project

Outputs	Workstreams
1. POC product approval	<ul style="list-style-type: none">• Technical evaluations• WHO PQ or SRA, CDC endorsement• In-country registration
2. Routine POC testing established	<ul style="list-style-type: none">• Patient impact• Operationalization• Site selection & network optimization• Uptake
3. Systems & Conventional strengthening	<ul style="list-style-type: none">• Demand generation• Sample transport• Data management systems• Supply chain• Linkage to care & retention
4. Global access pricing	<ul style="list-style-type: none">• Improved service terms• Sustainable pricing• Integrated pricing• Harmonized contracts across buyers
5. Catalytic procurement	<ul style="list-style-type: none">• Commodity procurement
6. Co-investment	<ul style="list-style-type: none">• WHO guideline recommendations• GF grants and PEPFAR COP• Adoption in other countries

Sharing good ideas & best practices: how?

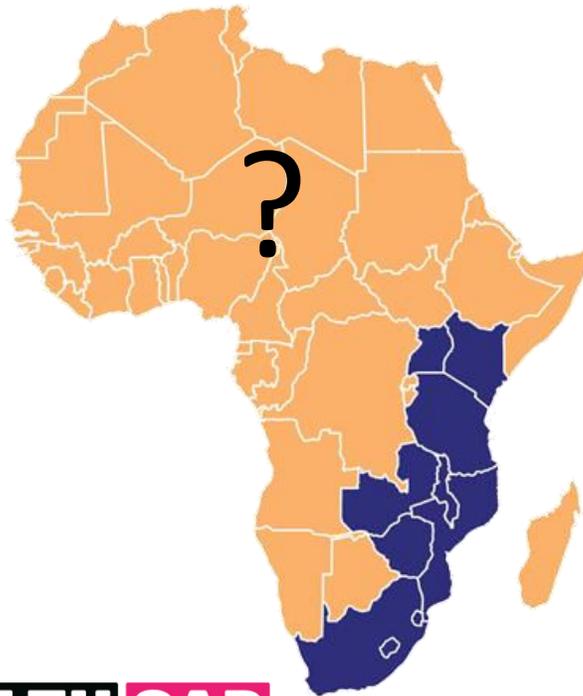
- ❑ Some countries have found '**better ideas**' to scale up viral load testing and to strengthen Laboratory systems,
- ❑ How can best practices, innovations and **implementation solutions** be identified, disseminated from one country to others and adopted?

How can less funded countries benefit from advancements made in VL scale up?

How do improvements along the viral load cascade benefit other diseases?

How to bring all stakeholders in the discussion?

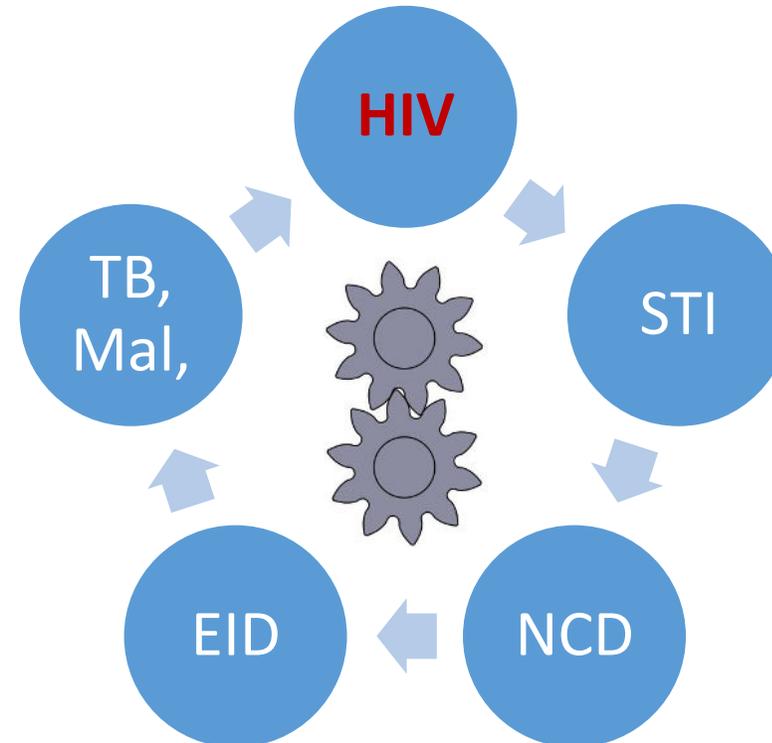
- Kenya
- Lesotho
- Malawi
- Mozambique
- South Africa
- Swaziland
- Tanzania
- Uganda
- Zambia
- Zimbabwe



HEALTH GAP
GLOBAL ACCESS PROJECT

DOZENS OF COUNTRIES LEFT OUT OF NEW PEPFAR STRATEGY, THREATENING THE GLOBAL AIDS RESPONSE

Plan Reflects Significant Resource Scarcity, Congress & Administration Failure to Provide Sufficient Funding



How Flexible is the Lab in the face of DSD models?

Laboratory needs

Program managers

clinicians

Civil society

Policy makers

Implementing partners

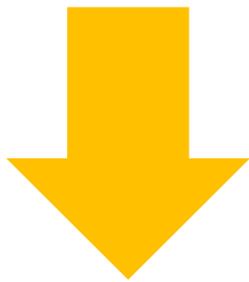
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The laboratory system strengthening Community of Practice

A Bill & Melinda Gates funded platform:

- ❑ For exchange and discussion between multiple countries and stakeholders
- ❑ For the fast track identification, dissemination and adoption of **'better ideas'**



to improve laboratory system functions and accelerate the scale-up of HIV Viral Load testing **for improved patient management**



Lab CoP



Supported by the Bill & Melinda Gates foundation

11 countries participate in LabCoP, so far

Ethiopia,
Kenya
Uganda
Tanzania
Malawi
Zambia,
Zimbabwe
Sierra Leone
South Africa
DRC
South Soudan

Participants Country Teams – **mix of stakeholders and disciplines** to take different perspectives into account

- Laboratory
- Policy makers
- Clinicians
- Civil Society
- Development and Implementing partners

Methods : interactive, online seminars (ECHO model) completed by individualized country follow-up and bi-annual face-to-face meetings

Focus areas prioritized based on:

- Feasibility of behavior change
- Multidisciplinary of discussion
- Opportunity for developing action plans

Virtual ECHO sessions

Lab CoP
LABCOP



VIRAL LOAD TESTING:

LABORATORY CAPACITY UTILISATION FOR OPTIMAL VIRAL LOAD TESTING COVERAGE: COUNTRY EXPERIENCES

Presenters: Nadine Abiala-DRC; Nancy Bowen-Kenya; Grace Kushemerwa-Uganda; Kabuje Anyelwijeje-Tanzania; Nora Vere-Zimbabwe;

Moderator: Charles Kiyaga ASLM

Tuesday 24th of April 2018
11:00 GMT
14:00 EAT



May 2018 LabCoP ECHO Session



TOPIC: IMPROVING HIV VL TEST RESULT UTILIZATION: CASE STUDIES FROM KENYA & MALAWI

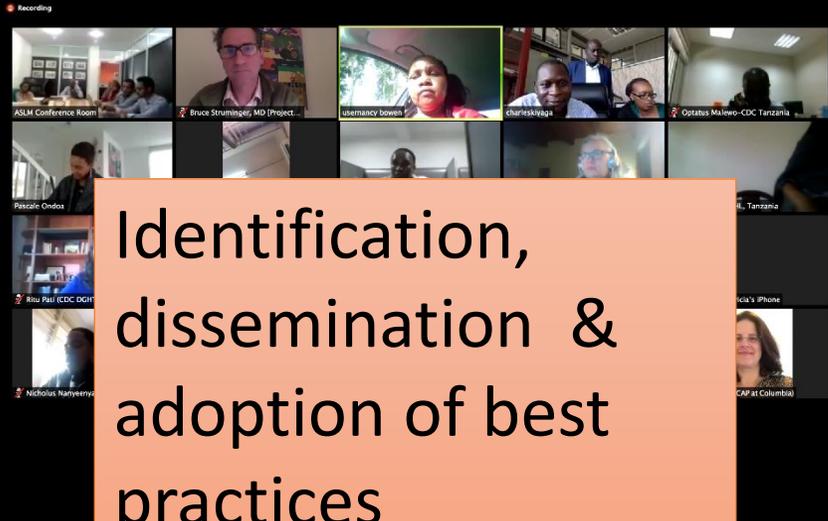


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SUBJECT MATTER EXPERT: DR MIRIAM RABKIN
ICAP Health Systems Strategist
ICAP at Columbia University

HOST: CHARLES KIYAGA
LabCoP Program Manager
ASLM

JOIN 11 COUNTRY TEAMS 30 MAY 2018 15:00 TO 16:00 EAT



Recording

ASLM Conference Room

Bruce Struminger, MD (Project...)

usemancy bowen

charleskiyaga

Optatus Malewo-CDC Tanzania

Pascal Ondoa

Rita Patel (CDC DOR)

Nicholas Nanyemba

ICAP at Columbia

Identification, dissemination & adoption of best practices

Country visits



VL testing cascade assessment



ACTION PLAN



Accelerate VL scale up and Strengthen Laboratory systems

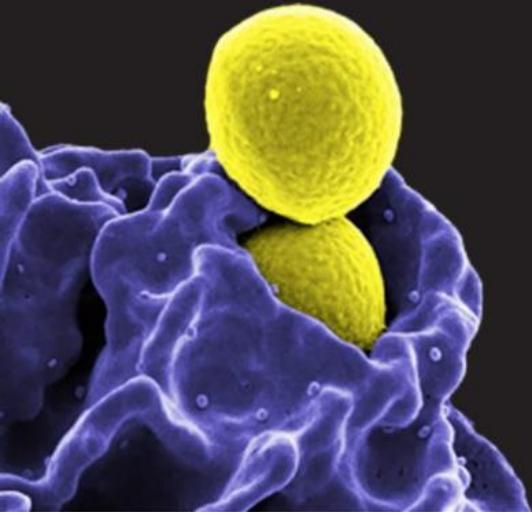
LabCop shares 'recipes' as opposed to 'menus'



Countries are not offered a chocolate cake on the menu

They are taught to cook the chocolate cake

Thank you



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2018