

# **VL Scale-up: 8 sub-Saharan Countries 2013-2018**

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# Expansion of HIV VL Testing

- Acceleration of HIV viral load testing has been a global priority following release of the World Health Organization (WHO) 2013 ART guidelines, which recommended using VL to monitor ART effectiveness.
- 2016, the ART guidelines were revised to recommend viral load testing for all HIV-positive persons
- These guidelines promote the UNAIDS goal to end the HIV/AIDS epidemic by 2030, with 95% of patients receiving ART having viral suppression by 2030
- Global ART expansion has increased demand for viral load monitoring. In 2018, 23.3 million persons were receiving ART, an increase of nearly 200%, compared with 8 million in 2010.

**Purpose:** Identify the progress made since the beginning of VL scale-up

Country selection was based on a previous approved protocol for PEPFAR priority countries which included: Cote d'Ivoire, Kenya, Uganda, Tanzania, Lesotho, Malawi, Namibia, S.Africa

Data collected by CDC Lab Advisors in collaboration with MOH from LIS on cumulative no. of ART patients, no. on ART with  $\geq 1$  VL test result, percent of VL results that showed viral suppression (defined as  $< 1,000$  copies/ml) . (Country data rather than PEPFAR data was used for the report.) A full calendar year was used for reporting vs USG fiscal year Oct-Sept.

Country guidelines – VL at 6 months after ART initiation, followed by testing at 12 months and annually thereafter (except for Malawi, which recommended viral load testing every 2 years).

# VL scale-up in pre-scale-up and post-scale-up periods by country

Country	Year of VL scale-up	Period pre- scale-up and 2018	Cumulative number of patients on ART+	
			Pre-scale-up	2018
<b>Cote d'Ivoire</b>	2015	2014 vs. 2018	129,993	248,194
<b>Kenya</b>	2014	2013 vs. 2018	631,503	1,069,451
<b>Lesotho</b>	2014	2013 vs. 2018	111,322	218,493
<b>Malawi</b>	2014	2013 vs. 2018	472,865	805,323
<b>Namibia</b>	2014	2013 vs. 2018	126,779	180,584
<b>Uganda</b>	2014	2013 vs. 2018	507,663	1,167,107
<b>Tanzania</b>	2015	2014 vs. mid 2018*	600,886	999,628*
<b>South Africa</b>	2014	2013 vs. mid 2018*	2,609,275	4,551,331*

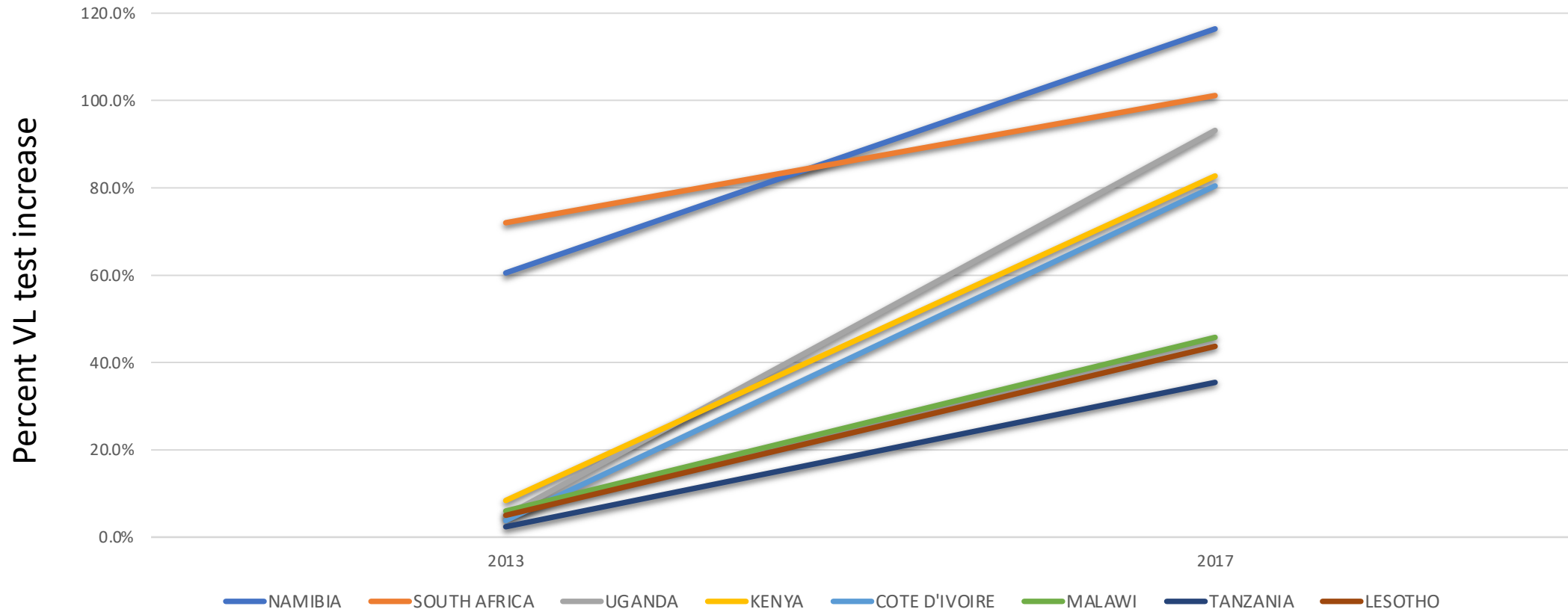
# Indicators for VL scale-up in pre- and post-scale-up periods by country

Country	Avg. interval from sample collection to return of VL test results to referring facility, days		% of ART VL tests indicating viral suppression (<1,000 copies/ml)	
	Before scale-up <sup>†</sup>	2018 (% change)	Before scale-up <sup>†</sup>	2018 (% change)
Côte d'Ivoire	10	15 (50)	66	78 (18)
Kenya	18	8 (−56)	64	90 (41)
Lesotho	56	28 (−50)	75	93 (24)
Malawi	18	18 (0)	86	86 (0)
Namibia	5	6 (20)	74	94 (28)
Uganda	18	14 (−22)	90	88 (−2)
Tanzania <sup>¶</sup>	10	27 (170)	80	85 (6)
South Africa <sup>¶</sup>	3	4 (33)	75	85 (13)
Total	—	—	—	—

\* South Africa and Tanzania reported through June 2018

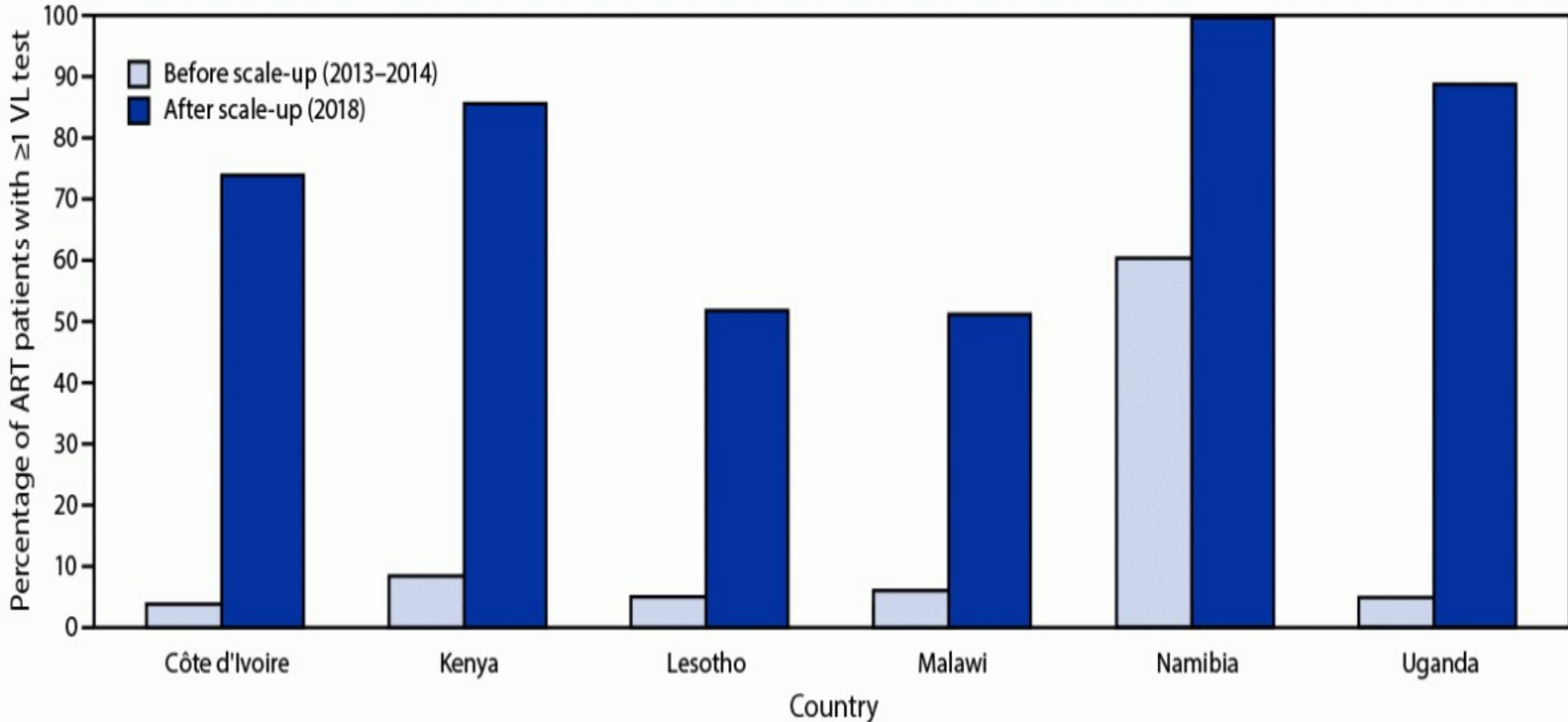
<sup>†</sup> Number of adult and pediatric patients currently receiving antiretroviral therapy (ART).

# ART Patients with $\geq 1$ VL: 2013-2017

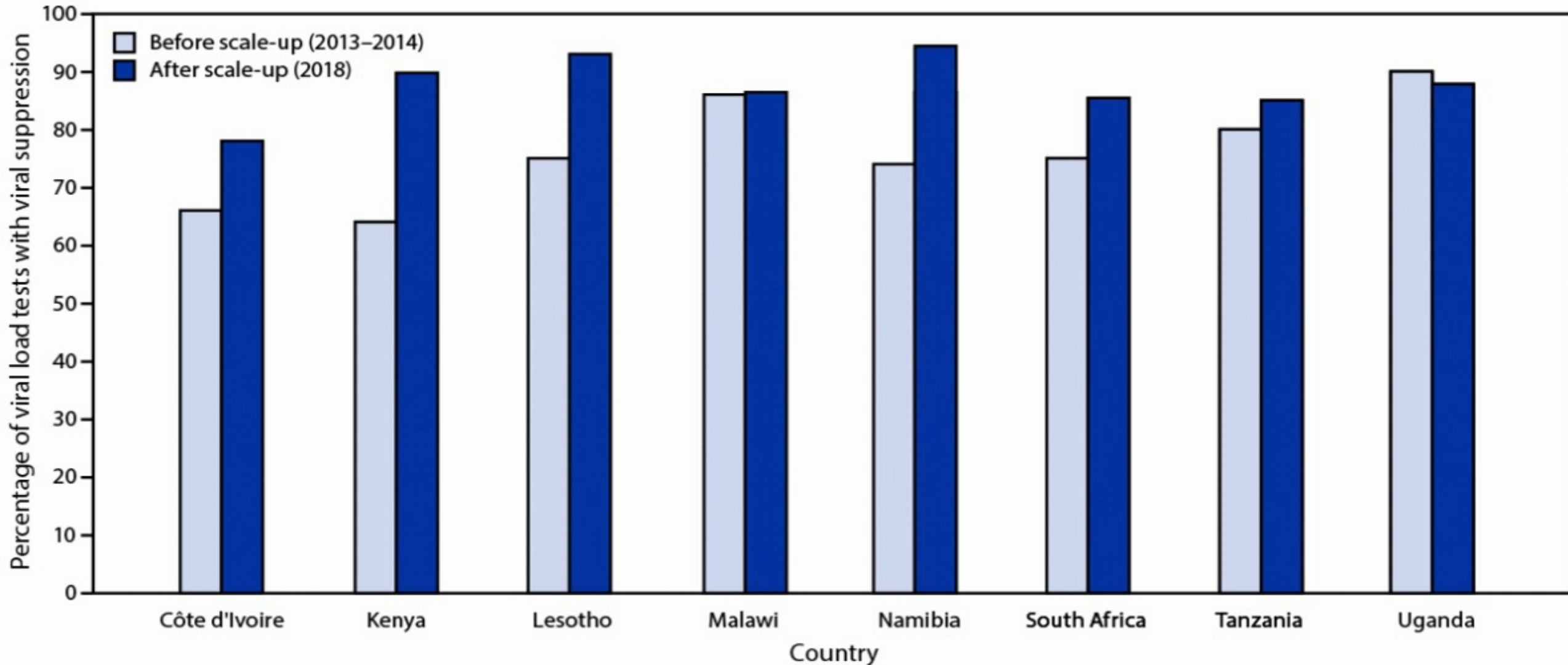


4 yrs: Cote d'Ivoire and Tanzania

# Percentage ART Patients with $\geq 1$ VL Test: 2013 - 2018



# Percentage of HIV viral load tests indicating viral suppression before and after VL scale-up — 2013–2014 and 2018





# How did Countries Accomplish scale-up VL Testing

- Sustained engagement between international partners and MOH
- Improved efficiencies throughout the VL cascade
- Community engagement with civil society helped with demand creation
- Strategies implemented for improvement in specimen transport
- Training multiple cadres – HCW (specimen collection), laboratorians (specimen processing and VL testing), data personnel (data entry, collection and transmission), clients (demand creation and requesting results)
- LIS systems installed, updated and dashboards created

# How did Countries Accomplish scale-up VL Testing

- Platforms – Early in VL scale-up countries procured platforms directly from manufacturers. Frequent issues with equipment breakdown, inability to replace obsolete models and high costs led to negotiations with manufacturers for reagent rental pricing and maintenance contracts allowing countries to expand capacity without incurring unnecessary expenses.
- In addition, deployment of POC and near POC platforms have expanded capacity and helped reduce TAT.

# Challenges

- Human capacity shortages sufficient for molecular testing for HIV VL and SARS CoV-2
- Task shifting
- Improving efficiencies such as DNO needed for VL and outbreak response for COVID-19 and other pathogens for current and future epidemics
- LIS systems require optimizing
- Weak procurement and logistics systems
- Linkage of data through dashboards (needed for multiple pathogens including HIV, SARS CoV-2, current outbreaks and emerging pathogens)

# Viral Load in the Context of SARS CoV-2

- Initially VLC decreased for PEPFAR countries in the adult population (aggregate data for all countries) with improvement after lockdowns and easing of other restrictions .
- VLS remained fairly stable and in recent months has increased slightly
- In the pediatric population VLC for different countries has been variable
- Of the 8 countries presented in this analysis VLC over the past year has shown some improvement for 6 countries and a decrease for 2 countries

# Conclusions

- VL scale-up has been successful regardless of challenges faced during the process with some countries surpassing the third 90 by the end of 2018 moving toward 95. Countries have continuously built and strengthened systems to progressively scale-up VL each year.
- High percentage of viral suppression  $>80\%$  was achieved for all but one country. Three countries Kenya, Lesotho and Namibia achieved  $\geq 90\%$  VLS.
- Maintaining gains VL testing while also meeting the challenges of COVID-19 such as preventing supply chain interruptions

# Conclusions (Cont.)

- VL result TAT decreased substantially in only three countries (Kenya, Lesotho, and Uganda); TAT increased in Cote d'Ivoire and Tanzania, highlighting the need for increased efficiency. Other countries TAT remained stable. The increased turnaround time could be explained by
  - 1) increased testing volume and the inability of existing systems to meet this demand;
  - 2) an increased number of facilities or service delivery points collecting specimens, leading to a more complex transport network;
  - 3) prolonged sample storage times until pickup at facilities or hub sites; or
  - 4) inadequate number of personnel to process the increased number of specimens at viral load laboratories.

Continued capacity building is needed to address these issues.

# Conclusions (Cont.)

- To overcome the remaining challenges, targeted interventions informed by data are needed to ensure that all patients receiving ART receive VL monitoring.
- Effective partnerships between ministries of health and multiple international stakeholders such as PEPFAR, ASLM, GF, WHO, CHAI, and others have contributed to progress in viral load monitoring. Ongoing engagement with ministries of health and finance and with other officials in financial and technical areas, at national, subnational, and community levels will be required to sustain and improve current gains.