



# Implementation of DSD using QI Approach in Kenya; Lessons Learnt

**Dr Lazarus Momanyi**

Technical Advisor

National AIDS & STI Control Program (NASCOP)

MoH, Kenya

12 November 2019

# Outline

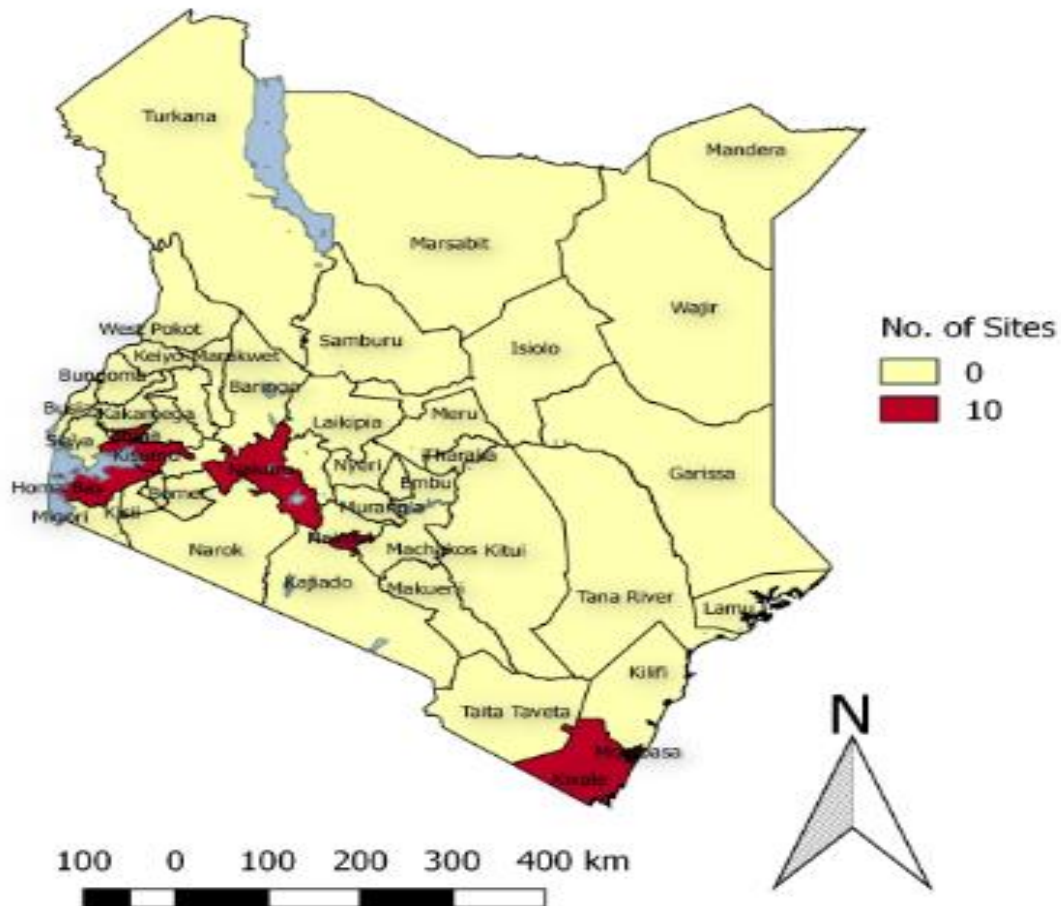
- Background
- Program Quality and Efficiency (PQE) Implementation
- QI Evaluation Study Findings

# Background

- June 2017 – June 2019: Kenya Ministry of Health, National AIDS and STI Control Program (NASCOP) piloted implementation of a less-intensive DSD model using a Quality Improvement (QI) approach in 7 Counties
- **Goal:** To produce evidence that DSD can be adopted by health facilities and that they lead to measurable efficiencies when implemented in a QI environment

# Program Quality Implementation (PQE)

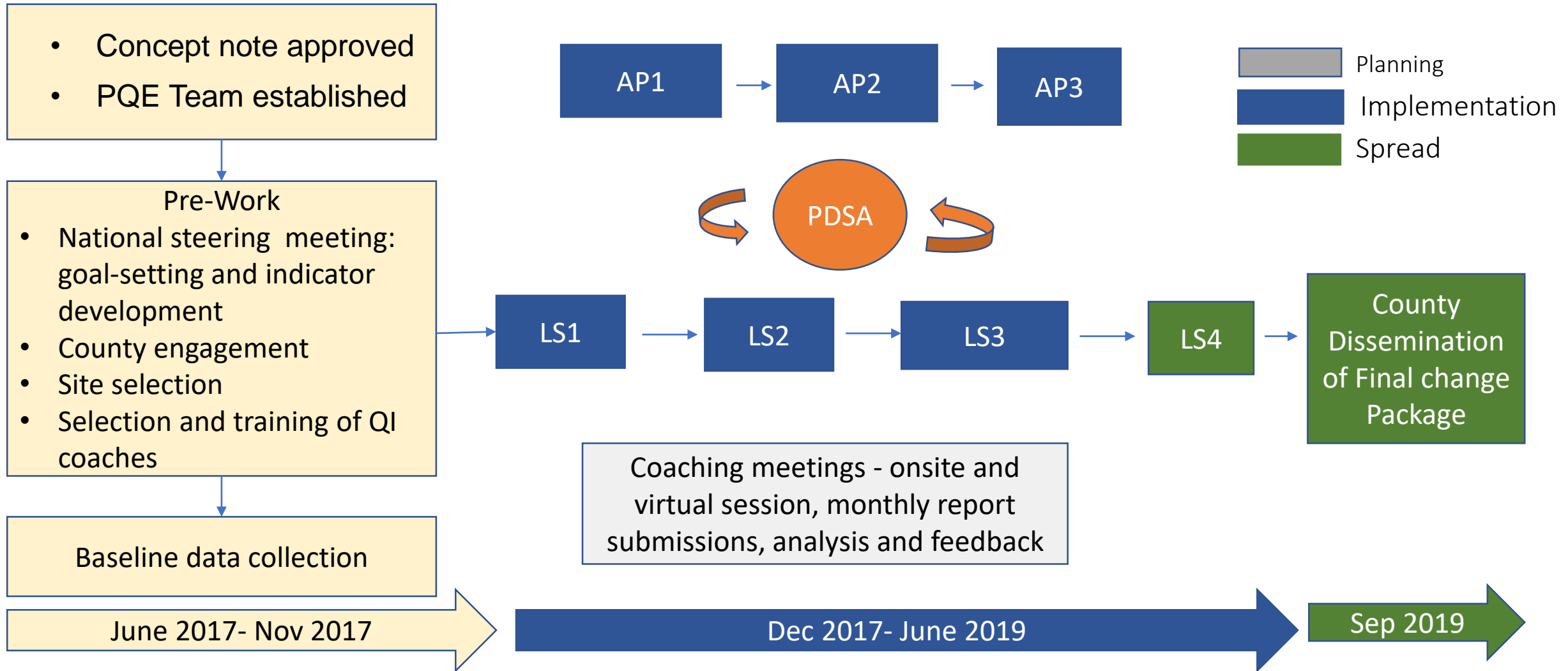
## Location of PQE Implementation



## Specific Objectives:

1. To **integrate**  $\geq 1$  less-intensive DART model into the HIV cascade
2. To **measure impact**, including: change in testing, linkage, treatment, and retention indicators
3. To estimate the change in **cost efficiency**
4. To **document** the process of implementation and lessons learnt

# PQE Structure and Timelines



Coaching  
Session at  
Health Facility  
in Nakuru  
County

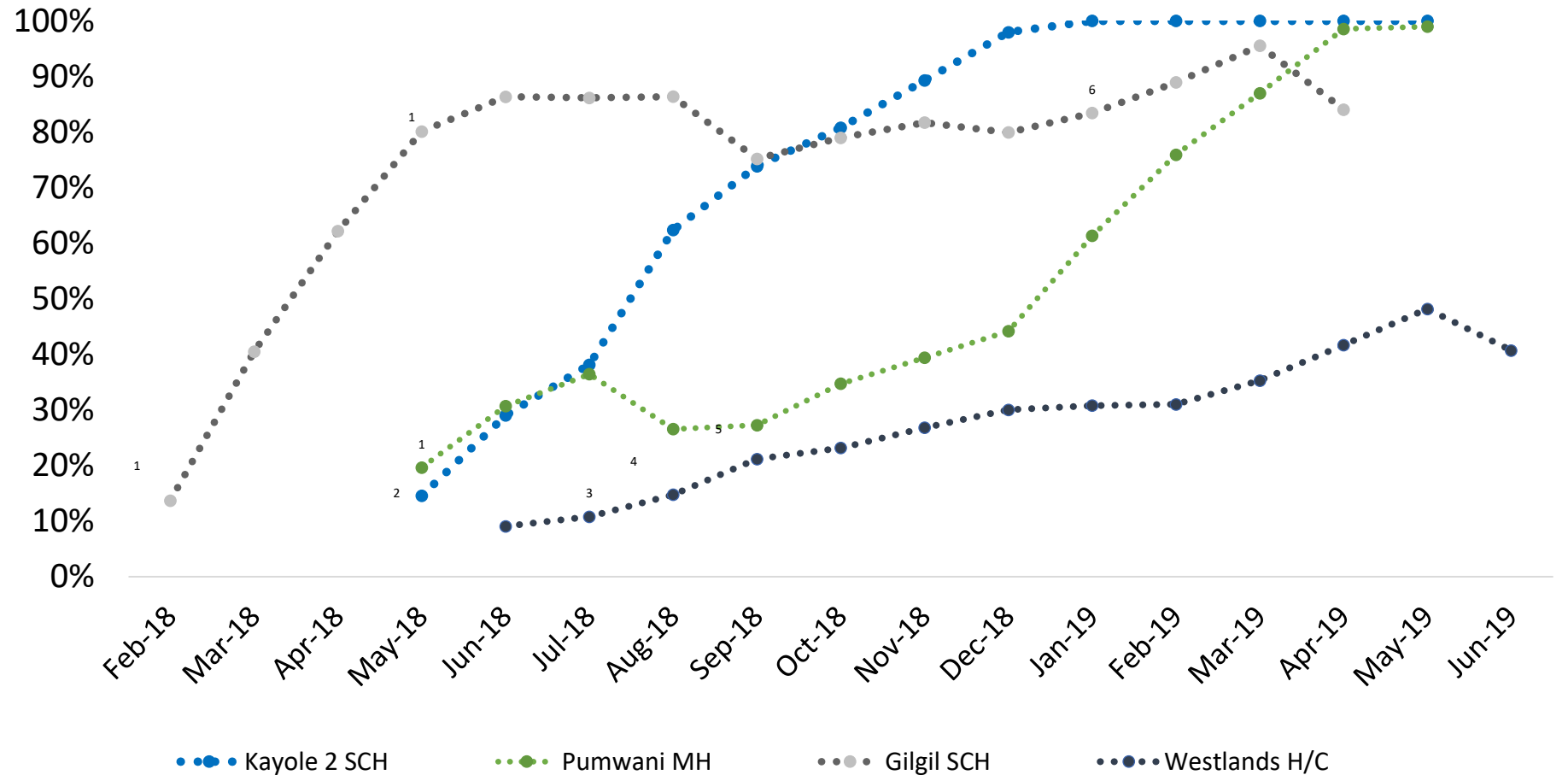


# Illustrative Tests of Change: Determining DSD Eligibility

## Tested Change Ideas

- Use of EMR for categorization
- Line listing of patients due for categorization
- Sensitization of staff through CME
- Improvisation of DAR to capture categorization
- Access of VL results through NASCOP website

## Proportion of Pts Categorized as Stable



# DSD implementation: Results

- Improvement in linkage within 3 months of a positive HIV test
- Increase in proportion of recipients of care categorized as stable
- Impact on proportion of stable recipients of care enrolled in less-intensive models (Fast Track and Community Dispensing) varied across health facilities and counties



# Outline

- **Background**
- **Program Quality and Efficiency (PQE) Implementation**
- **QI Evaluation Study Findings**

# Broad Study Objectives

**Goal:** To compare DSD + QI intervention and DSD only sites

## Objectives

1. To review DSD and QI implementation;
  - Processes of care (recipients of care journey), guideline compliance, provider & RoC knowledge
  - Outcomes: timely ART initiation, retention, viral suppression
2. To assess recipients of care and provider experience/satisfaction
3. To assess the average cost of HIV treatment

# Study Design

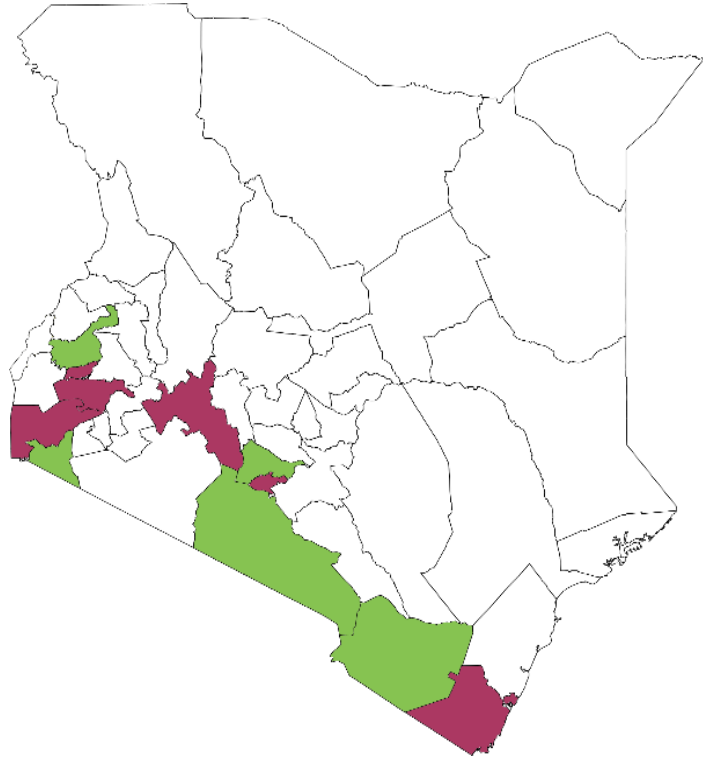
## Methods:

- Recipient of care and provider cross sectional survey
- Retrospective medical chart abstraction
- Time driven activity-based costing
- Health outcomes evaluation

## Study sites/sampling:

- Matched 15 intervention and control sites on ART patient volume, type/level of facility, rate of VL testing and county

# Study Sites / Sampling



- Intervention Counties:** Homa Bay, Mombasa, Kwale, Vihiga, Kisumu, Nakuru, Nairobi
- Control Counties:** Migori, Kakamega, Kiambu, Taita Taveta, Kajiado

## Sample Size:

- 1,419 non-pregnant adults on ART for  $\geq 6$  months
  - Intervention N = 782
  - Control N = 637
- 56 health providers
- 30 facility costing estimates

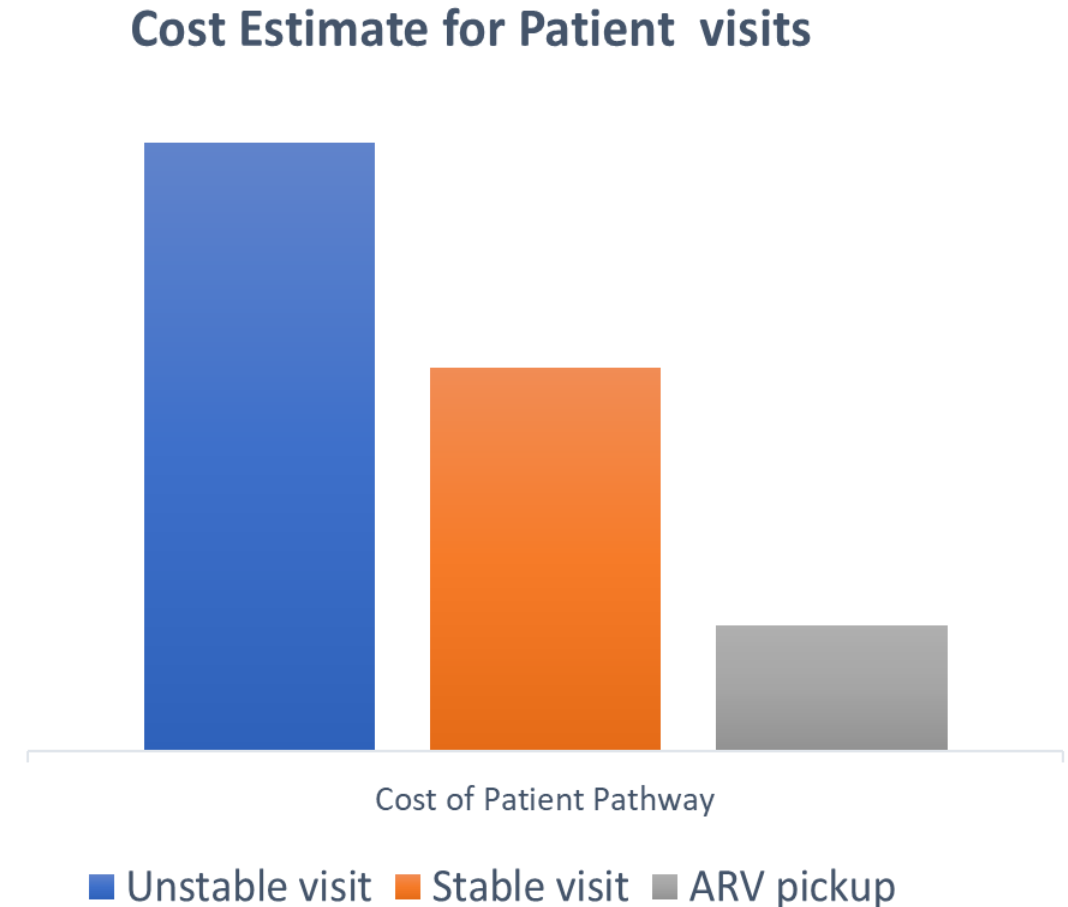
# Preliminary Results

- ❖ Less-intensive DSD models were less expensive for the health system than more-intensive models at both control and intervention sites
- ❖ There was no difference in the cost of providing less-intensive DSD
- ❖ RoC satisfaction and knowledge about their care was slightly higher at intervention sites
- ❖ There was no difference in quality of life
- ❖ There was no difference in provider satisfaction
- ❖ *Viral suppression rates were higher at intervention sites*

# Preliminary Results – 2

## Costs to the Healthcare System were Lower for People in DSD

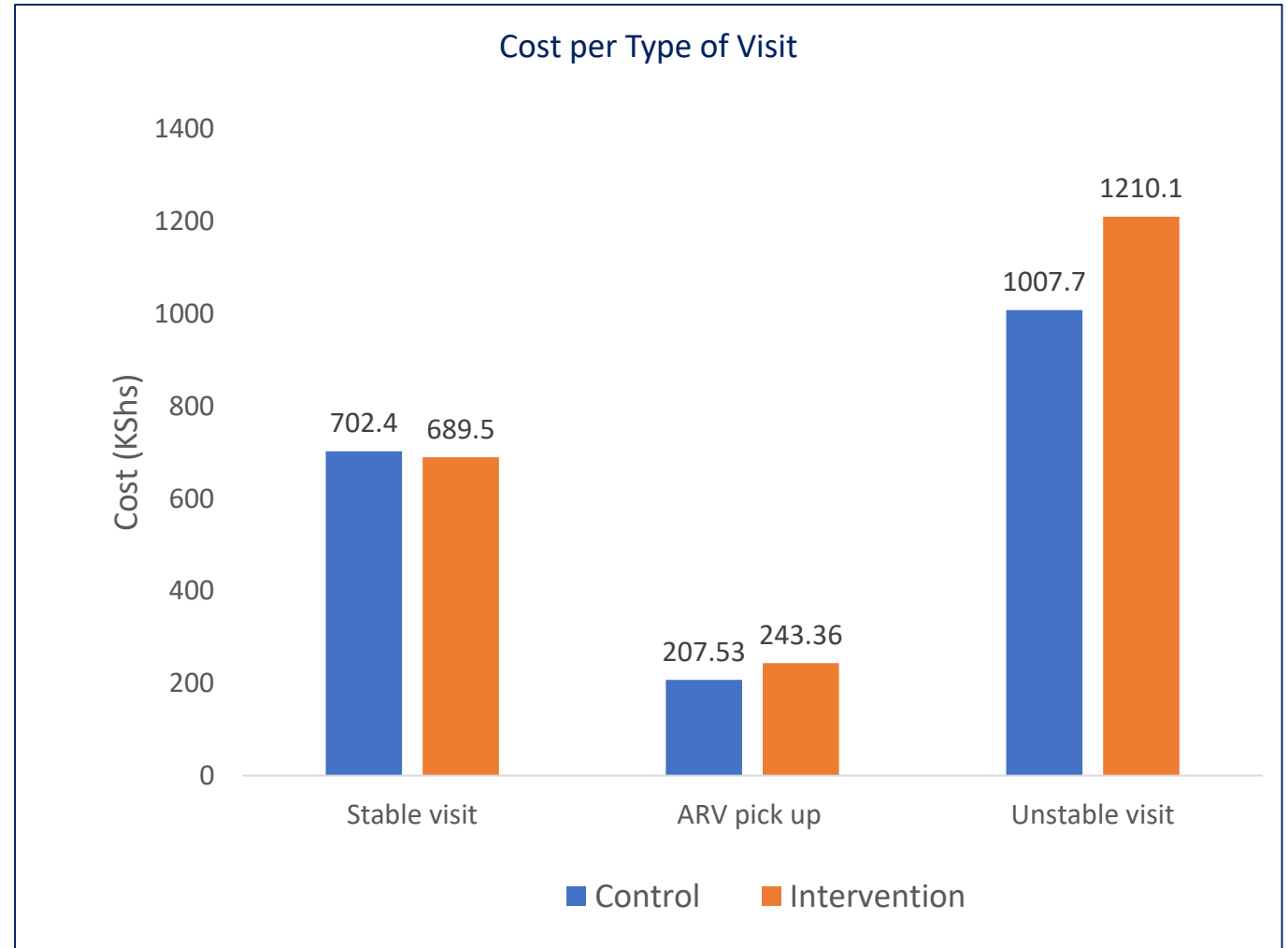
- Costs were estimated using TDABC
- Focused on costs to the healthcare sector regardless of payer, not costs to patients
- Estimated costs for 3 types of visits:
  - Unstable clinical visit: **Ksh1105**
  - Stable clinical visit: **Ksh 696**
  - Stable ARV pick up: **Ksh 230**
- The largest cost category for all 3 visit types = personnel



# Preliminary Results - 3

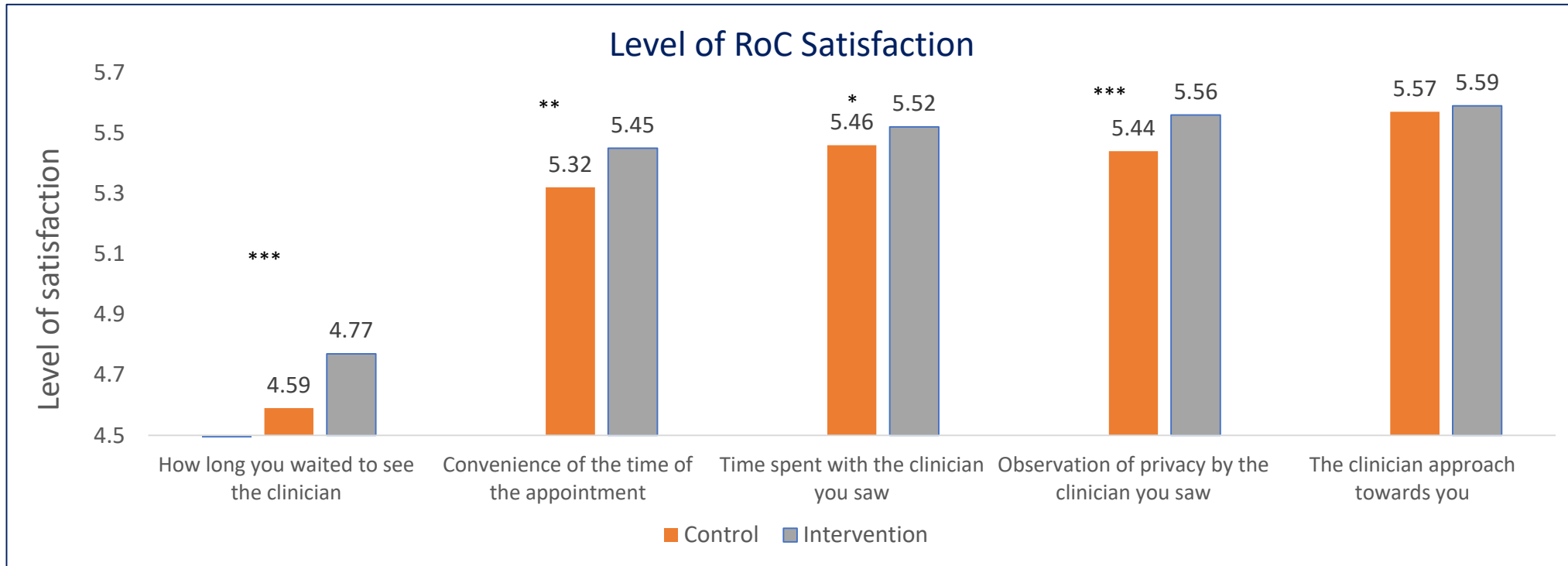
Costs for RoC in DSD models were the same at intervention and control sites

- For the Stable and ARV pick up model, no difference in costs in control vs. intervention sites
- The cost was 20% higher for unstable visits in intervention sites



# Preliminary Results – 4

## Higher levels of patient satisfaction at intervention sites



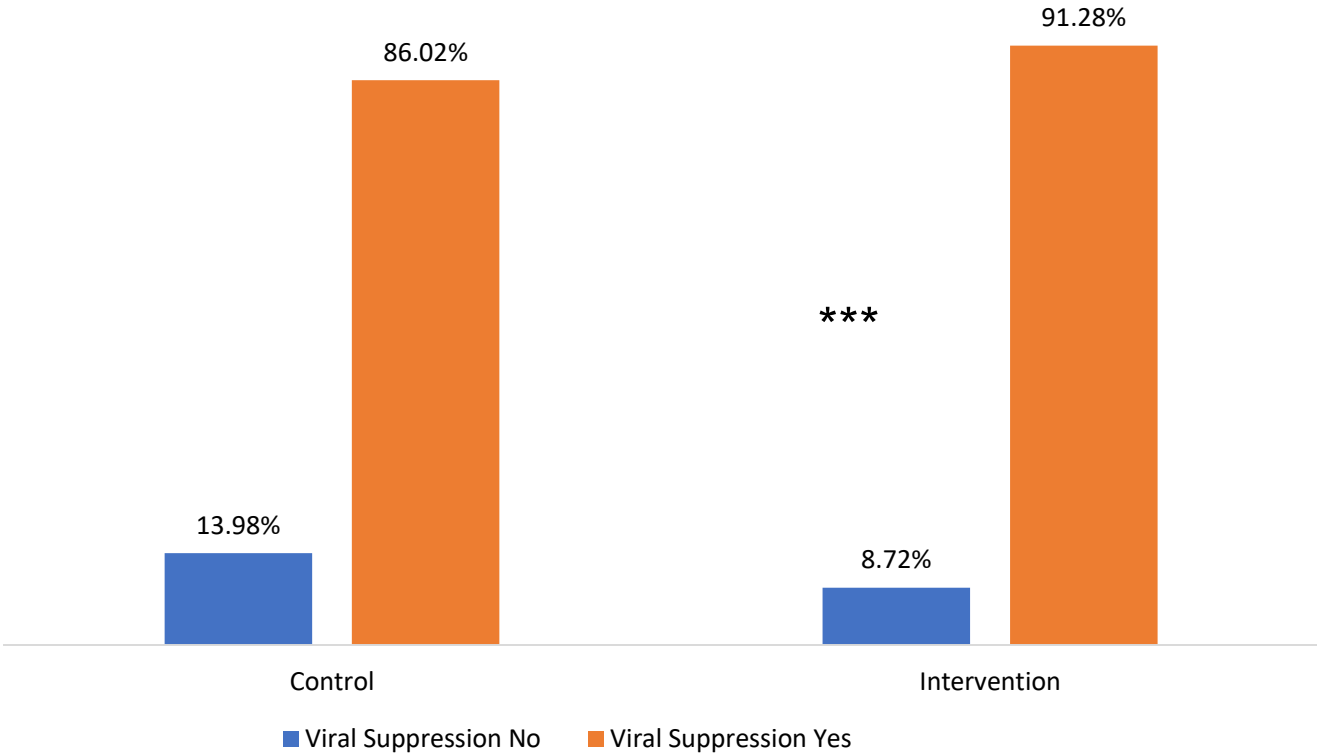
- The Average reported satisfaction score was 5.4. No significant difference between the intervention and control sites
- RoC in intervention sites were more satisfied with time taken to see a clinician and the observation of privacy by the clinician



# Preliminary Results – 5

## Viral load suppression was higher at intervention sites

Percentage of RoC that were viral suppressed based on medical records



\*\*\* p<0.01, \*\* p<0.05, \* p<0.10

# Conclusions

## Preliminary data suggest:

- Recipients of Care at DSD+QI sites had higher rates of satisfaction and viral suppression compared to those at DSD-only sites
- The additional costs of QI services are affordable

Additional analyses is required to control for other confounders - **Coming soon**

# Discussion

- DSD implementation experience points to varied program implementation and fidelity despite standardized guidance
- Our study suggests that adding QI to DSD implementation may improve patient satisfaction and outcomes while reducing costs to the health system (preliminary results)
- As with many CQUIN countries, Kenya needs more RoC-level indicators to assess impact of DSD at scale

# Acknowledgements



Ministry of Health

**NATIONAL AIDS & STI CONTROL  
PROGRAMME**



REPUBLIC OF KENYA



MINISTRY OF HEALTH

