



# **Integrated HIV and Non-communicable Disease Care in Community Microfinance Groups: Retention in Care Findings from the Harambee Cluster Randomized Trial**

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- **No conflicts of interest to report**



# Harambee Investigative Team

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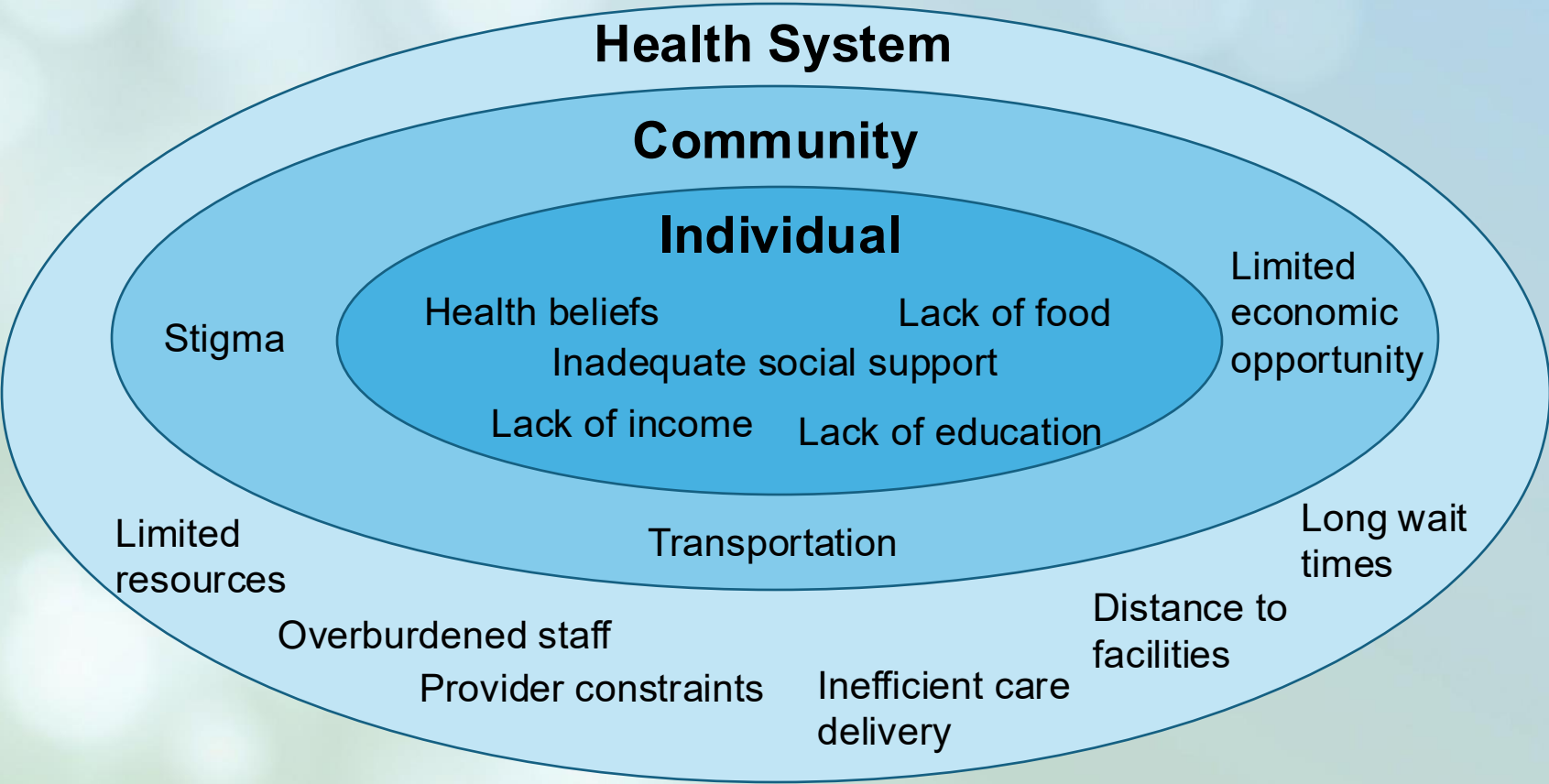
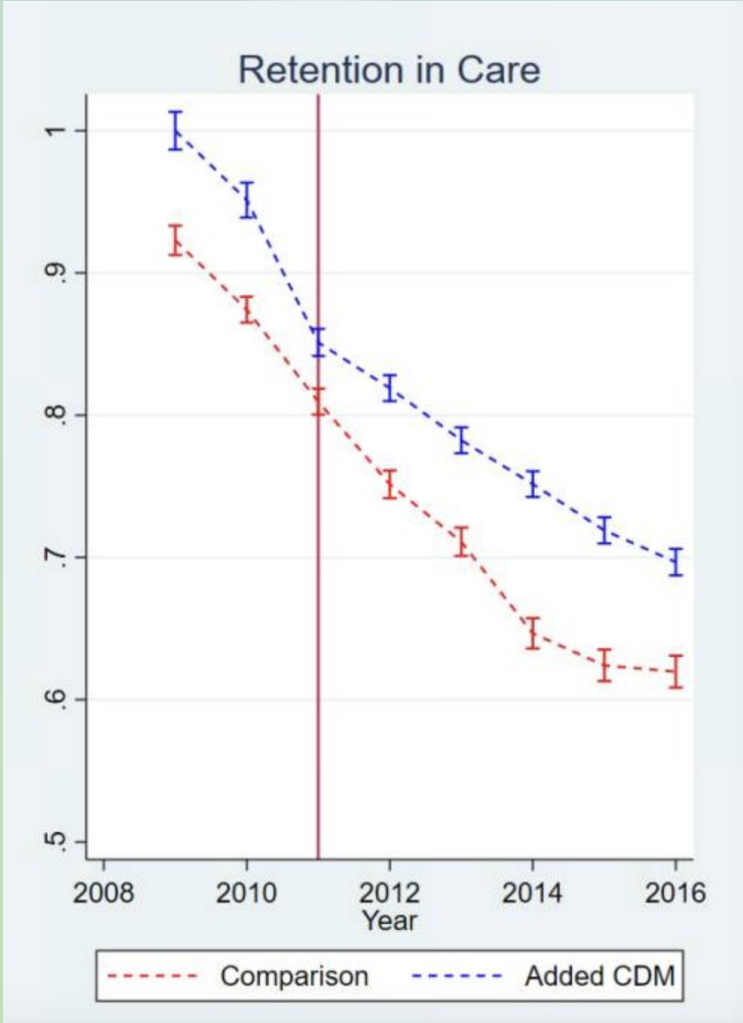


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# Persistent Multilevel Barriers in HIV Care Continuum

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Osetinsky BJ et al. JAIDS 2019 ;82(4):399-406

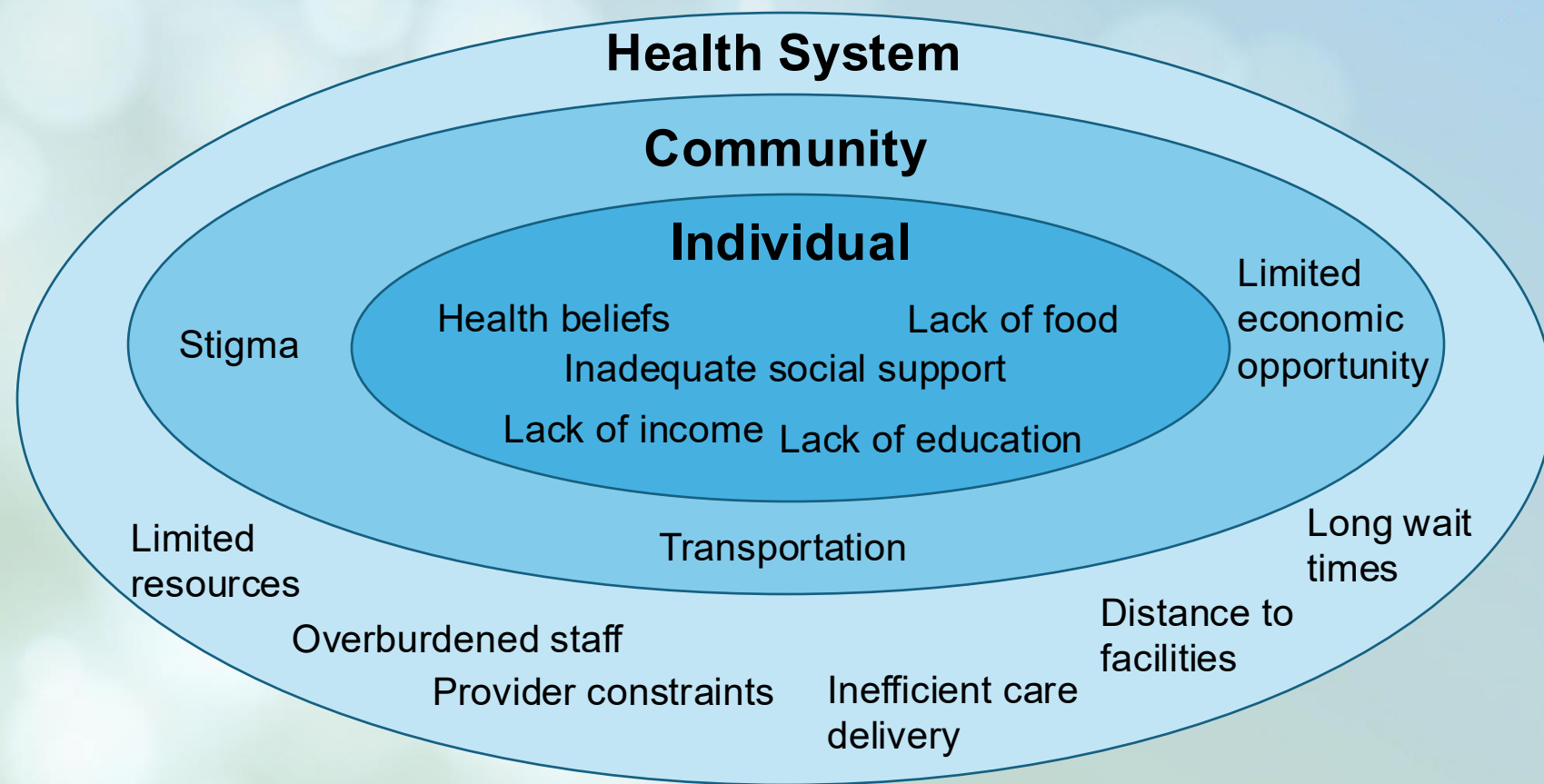
Wachira J, et al. BMC Health Serv Res. 2014 Dec 19;14:646; Rachlis B et al. BMC Public Health 2016;16:741; Genberg B, et al. J Int Assoc Provid AIDS Care. 2019 Jan-Dec;18:2325958218823285.

# Harambee Cluster Randomized Trial

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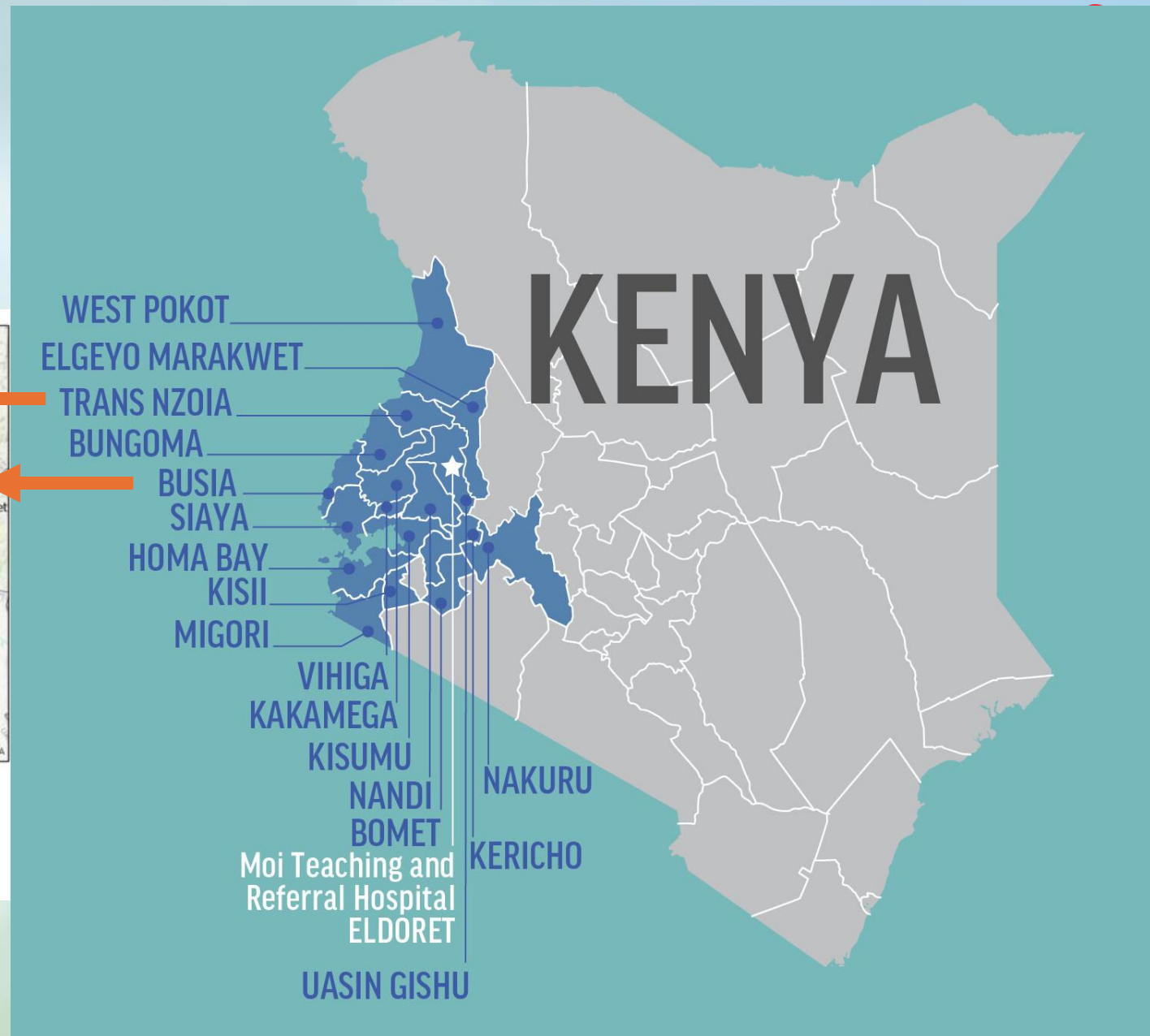
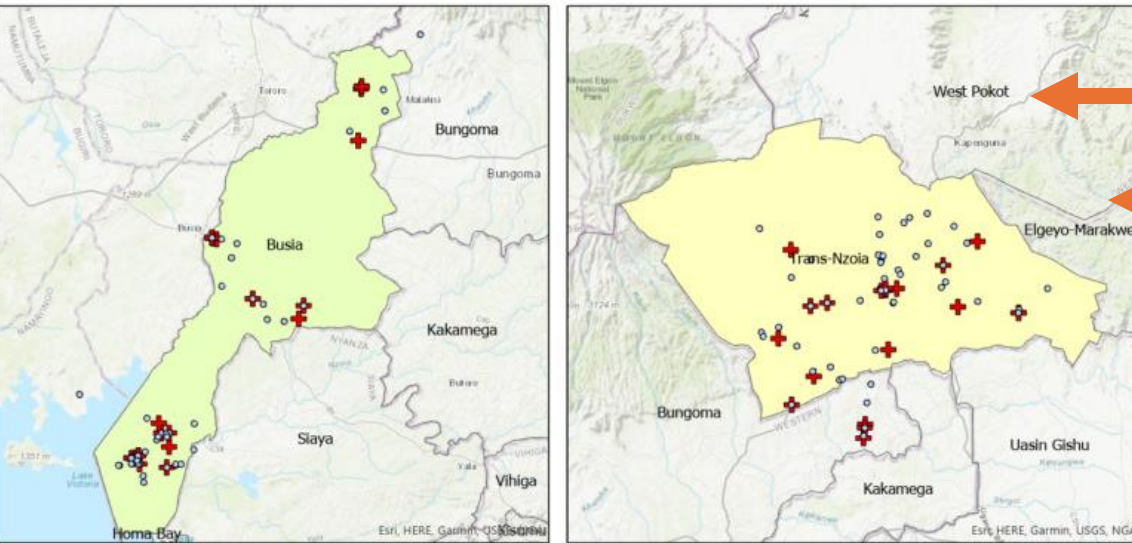
Our objective was to test the hypothesis that providing integrated HIV and non-communicable disease care within community microfinance groups would improve viral suppression and retention in care among people living with HIV in western Kenya.



Trial registration number: [NCT04417127](https://www.clinicaltrials.gov/ct2/show/study/NCT04417127)



# Study Setting – AMPATH



<https://www.ampathkenya.org/where-we-work>



# Inclusion Criteria – Group and Individual

## Groups:

- Formed at least 6 months prior to baseline
- Majority of members had disclosed HIV status

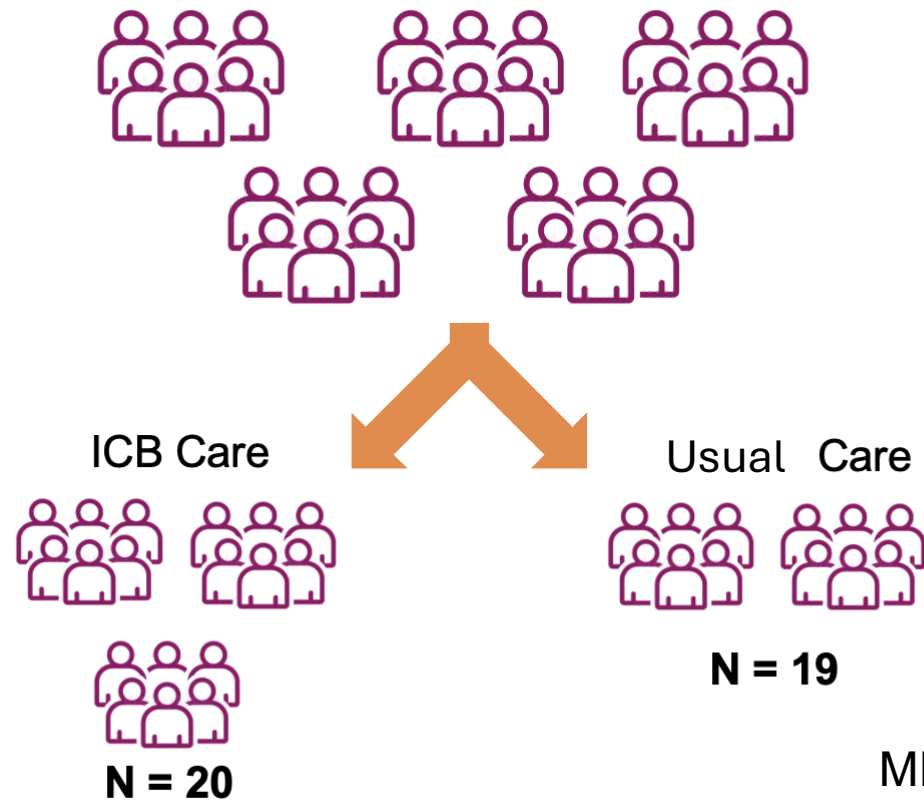
## Individuals:

- 18 years of age or older
- Diagnosed with HIV and receiving care through AMPATH
- Initiated ART at least 6 months before baseline
- Had attended at least 1 microfinance meeting in the prior 6 months at baseline
- Willing and able to provide informed consent



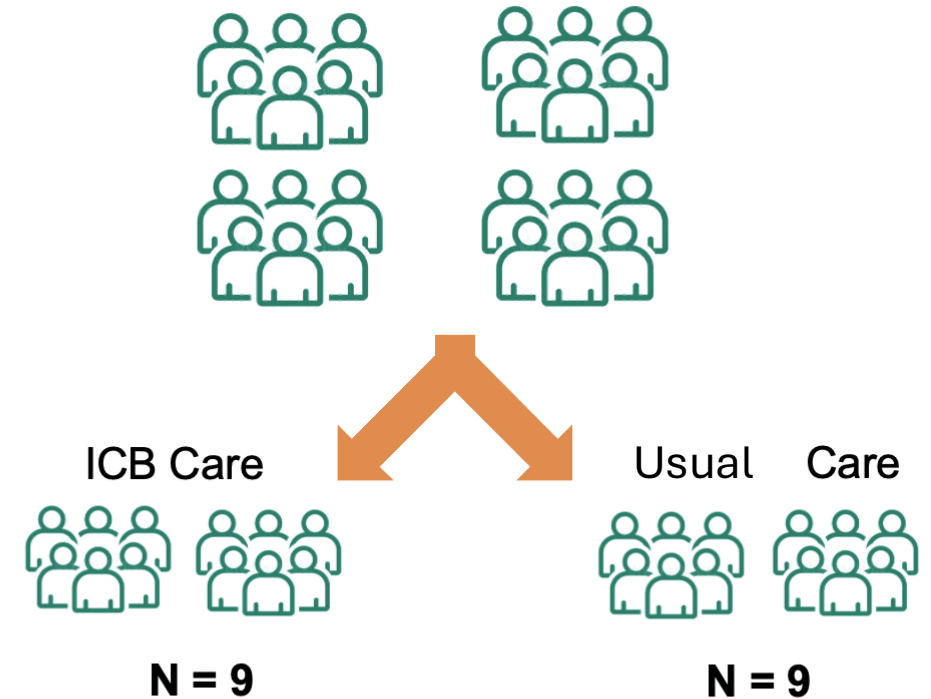
# Stratified Group Randomization

## Busia County



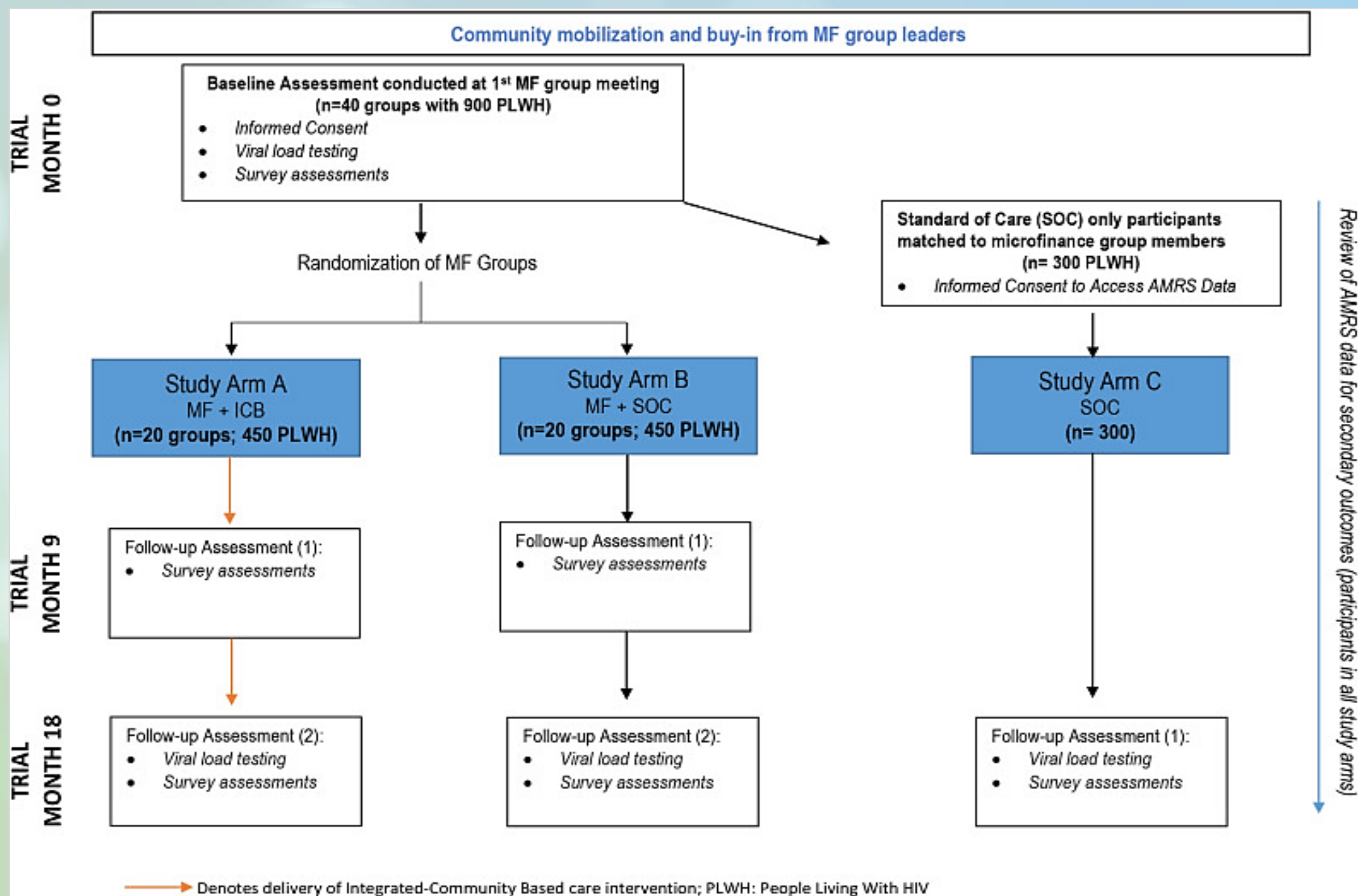
MF + ICB: n = 407  
MF + UC: n = 448

## Trans Nzoia County



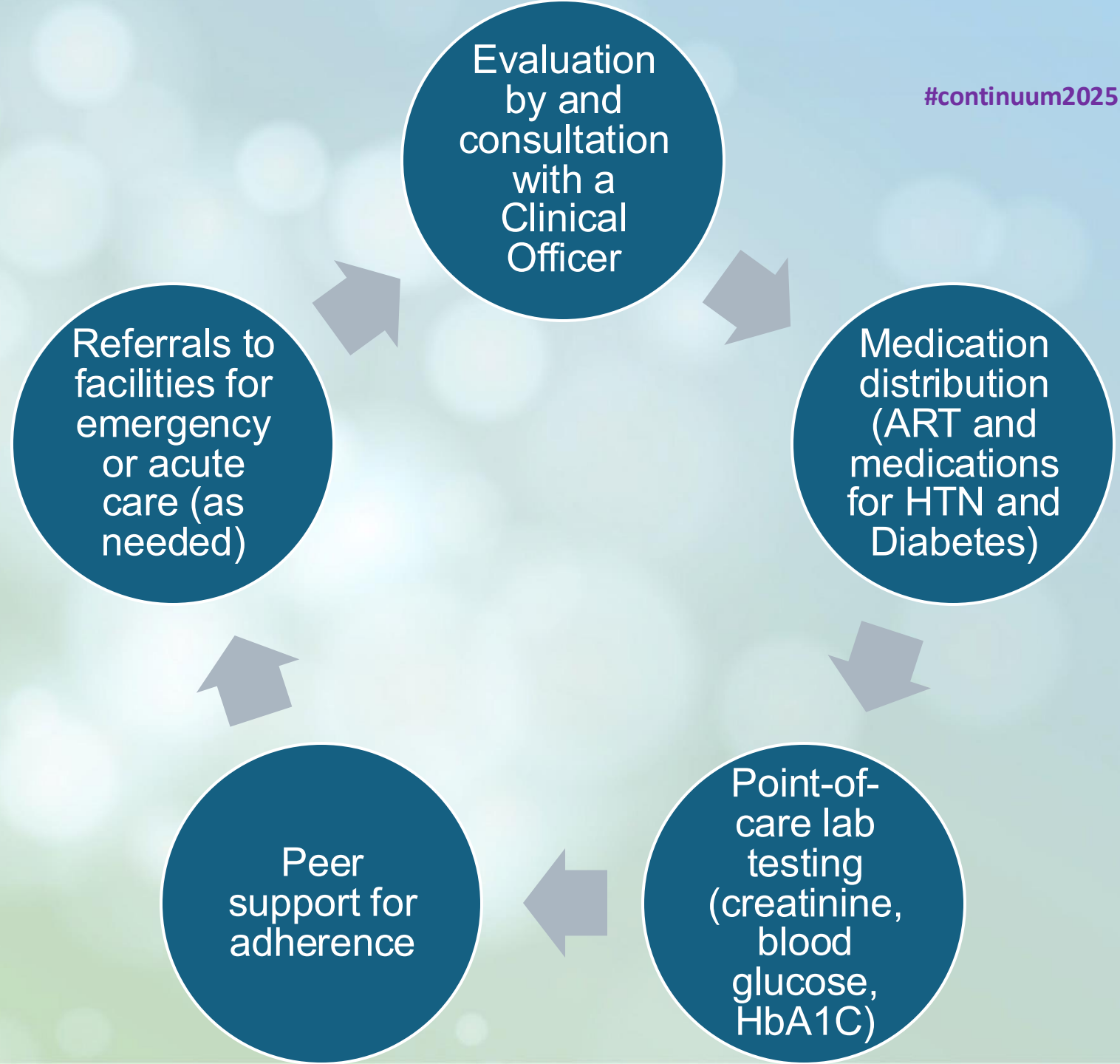


# Study Design



# Integrated Community- Based (ICB) Care

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# Statistical Analysis

- Intention-to-treat analysis of randomized arms
- Doubly robust generalized estimating equation (GEE) with a logit link function and robust variance estimator
- Baseline covariates (county, baseline viral load (log-transformed), schooling achieved, age, gender) were included in adjusted analysis
- Multiple imputation was used to account for missing data on baseline covariates.
- Additional analysis included a comparison to the non-randomized arm (no clustering, adjustment for baseline covariates)





# Definition of Retention in Care Outcome

- Retained in HIV care was defined as attending at least one scheduled HIV care visit in each quarter during the 18 month follow up period, where
  - Visits within +/- 28 days of scheduled visit dates (following AMPATH care protocols) were considered attended, and
  - Patients who had no visit(s) scheduled in a given quarter were considered retained for that quarter
- Measured using medical records data
- Stability analysis used a 3-level outcome definition: always retained in care, left and later returned to care, and lost to care



## Characteristics of study population at first visit following randomization, by study arm

	MF+ICB N=407	MF+UC N=448	UC N=300	Total N=1155
Age, mean, in years (SD)	51.7 (11)	51.4 (12)	52.6 (11)	51.8 (11)
	n (%)	n (%)	n (%)	n (%)
Female	305 (75)	336 (75)	230 (77)	871 (75)
Marital status = married <sup>1</sup>	167 (41)	211 (47)	126 (42)	504 (44)
Monthly income <5000 KES (\$30USD)	100 (25)	121 (27)	127 (42)	348 (30)
Educational attainment				
None	52 (13)	81 (18)	49 (16)	182 (16)
Primary	211 (52)	237 (53)	164 (55)	612 (53)
Secondary	53 (13)	47 (11)	59 (20)	159 (14)
Other <sup>2</sup>	91 (22)	83 (18)	28 (9)	202 (18)
Virally suppressed (<400 cp/mL)	384 (94)	415 (93)	291 (97)	1090 (94)

<sup>1</sup>Non-married marital status options: widowed, never married, divorced/separated, other, missing; <sup>2</sup>Other educational attainment: tertiary, missing



## Retention in Care Comparing Randomized Trial Arms (MF+ICB vs. MF+UC)

	MF+ICB	MF+UC	Odds Ratio (95% CI)	P-value
Enrolled	900			
Randomized	407	448		
Censored (drop-out)	72	71		
Retained in care each quarter during 18-months of follow up	315 (77·5%)	235 (52·5%)	3·31 (2·58, 4·26)	<0·001

Data are n (%) or n with available data.

MF+ICB = group microfinance with integrated, community-based care. MF+UC = group microfinance with usual care.

MF+UC is the reference group. Retained in care was defined as attending at least one HIV care appointment within +/- 28 days of the scheduled visit date for each quarter during the 18-month follow up period.





## Retention in Care Comparing Intervention Arm (MF+ICB) to Non-Randomized Matched Prospectively Followed Usual Care Arm (UC)

	MF+ICB	UC	Odds Ratio (95% CI)	P-value
Randomized	407	300		
Censored (drop-out)	72	9		
Retained in care each quarter during 18-months of follow up	315 (77·5%)	51 (17·1%)	7·51 (6·00, 9·55)	<0.001

Data are n (%) or n with available data.

MF+ICB = group microfinance with integrated, community-based care. UC = usual care. UC is the reference group. Retained in care was defined as attending at least one HIV care appointment within +/- 28 days of the scheduled visit date for each quarter during the 18-month follow up period.



## Retention in Care Comparing Control (MF+UC) Arm to Matched Prospectively Followed Standard of Care Control Arm (UC)

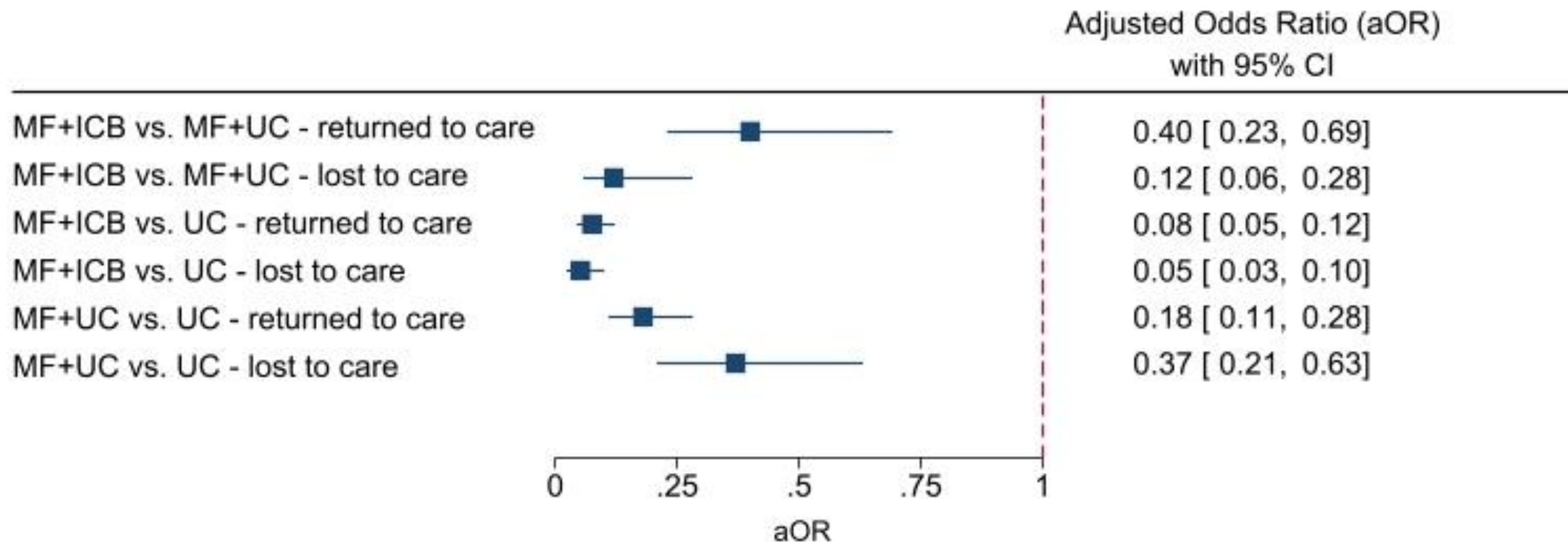
	MF+UC	UC	Odds Ratio (95% CI)	P-value
Randomized	448	300		
Censored (drop-out)	71	9		
Retained in care each quarter during 18-months of follow up	235 (52·5%)	51 (17·1%)	2·56 (2·14, 3·06)	<0.001

Data are n (%) or n with available data.

MF+UC = group microfinance with usual care. UC = usual care. UC is the reference group. Retained in care was defined as attending at least one HIV care appointment within +/- 28 days of the scheduled visit date for each quarter during the 18-month follow up period.

# Stability Analyses

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The baseline comparison category is Always Retained in Care.

MF: Microfinance; ICB: Integrated Community-Based Care; UC: Usual (Facility-Based) Care





# Limitations

- Disruptions due to COVID-19 pandemic
- Usual care patients were not randomized
- Limited generalizability of trial
  - Existing microfinance groups at baseline
  - All patients engaged in care at baseline



# Conclusions

- Receiving integrated community-based care within microfinance groups improved retention in HIV care, compared to receiving usual facility-based care with and without microfinance.
  - Participating in group microfinance alone (while continuing to receive usual services in a facility) also showed to improve retention when compared to usual care patients not participating in microfinance.
- Integrated and accessible services that address holistic care needs along with socioeconomic barriers can improve retention in care, and may be especially important for the most geographically remote and economically disadvantaged patients





Harambee Study Team







**Thank you!**

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