Costs and Consequences of HIV Linkage-to-Care Strategies Implemented in Urban and Rural South African Settings

Kristen Little, MPH PhD

Co-Authors: Tonderai Mobuto, Griffiths Kubeka, Salome Charalambous, David Dowdy, & Christopher J Hoffmann

BACKGROUND

COSTS AND CONSEQUENCES OF HIV LINKAGE-TO-CARE STRATEGIES

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Life expectancy for people living with HIV (PLHIV) receiving early ART is similar HIV-uninfected counterparts

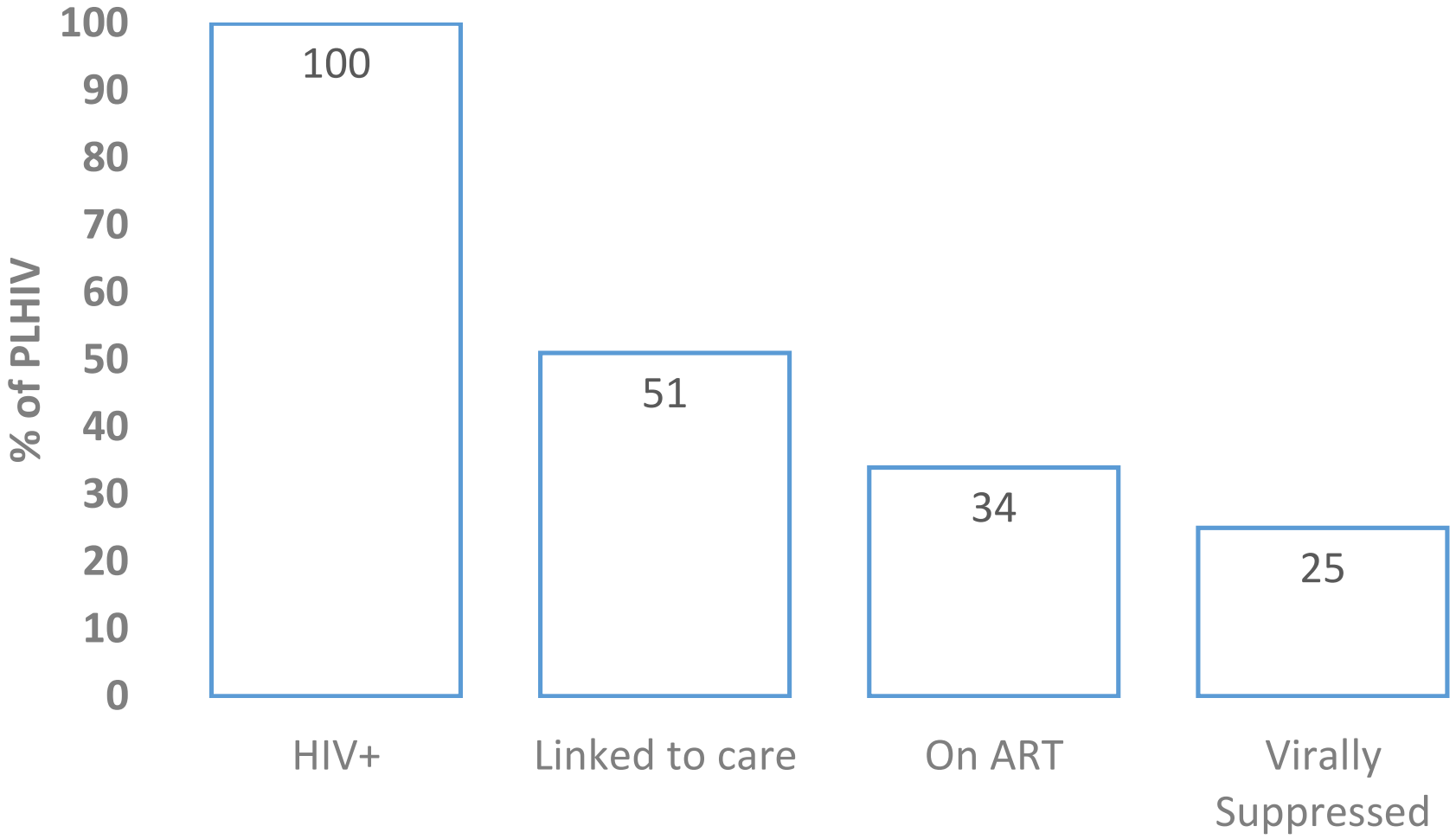
Remaining life expectancy gap may be attributable to:

- Incomplete HIV testing coverage & late HIV diagnosis
- Delayed ART initiation & poor ART adherence

If potential of ART is to be realized:

- Reduce delays between infection, diagnosis, and entry-into-care
- Develop cost-effective entry-into-care systems
- Improve linkage into care and treatment
- Support adherence to treatment

HIV Clinical Care Cascade, South Africa (2012)



Takuva S, Brown A, Macleod W, et al. Disparities in Engagement Within HIV Care in South Africa. CROI, Seattle, Washington: 2015.

PARENT STUDY DESIGN

Thol'impilo Study

- Unmasked, individually randomized pragmatic trial of 3 linkage-to-care interventions
- Conducted in urban and rural settings in South Africa

Outcomes: 90 day entry-into-care (self-reported and verified) & ART initiation at 180 days

OBJECTIVES

- Estimating the incremental costs to the health system of three linkage-to-care interventions

- Evaluating the comparative consequences of these interventions in terms of timely linkage into care and initiation of ART

METHODS

COSTS AND CONSEQUENCES OF HIV LINKAGE-TO-CARE STRATEGIES

LINKAGE-TO-CARE INTERVENTIONS

Point of Care CD4 count (POC CD4)	Routine counseling plus POC CD4 testing using the PIMA Analyser
POC CD4 + Care Facilitation (CF)	Routine counseling plus POC CD4 testing + up to 5 sessions of standardized counseling
POC CD4 + Transport Assistance (TA)	Routine counseling plus POC CD4 testing + transport reimbursement for up to 3 clinic visits
Standard of Care (SoC)	Routine pre-/post-test counseling provided to everyone receiving HIV testing

METHODS: COSTING

Estimated costs using a bottom-up, “ingredients”-based approach

- Perspective of the healthcare system
- 2014 US Dollars

Data collected through time motion studies, interviews and structured observations with program staff, and a review of budget and expense information

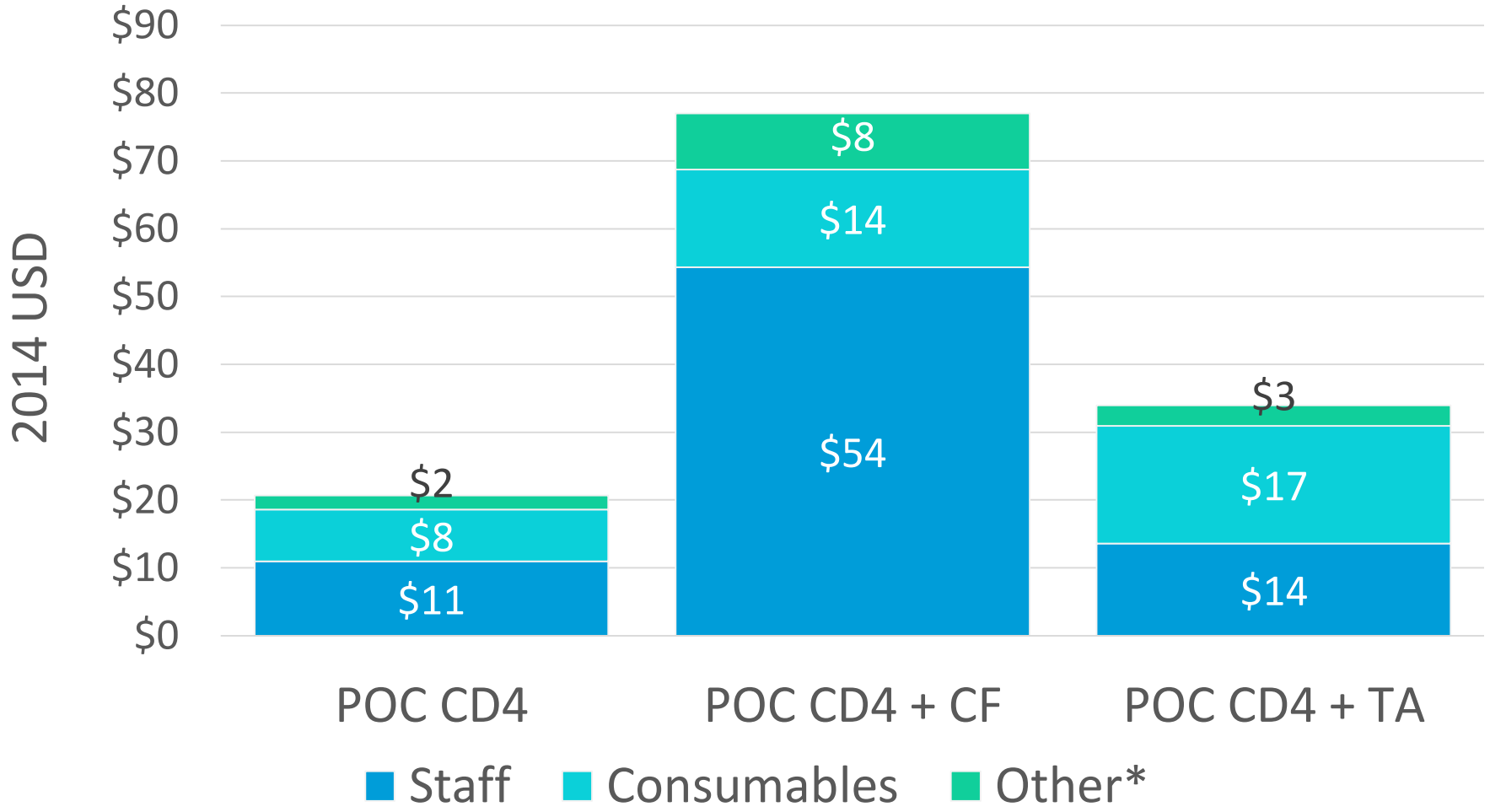
RESULTS

COSTS AND CONSEQUENCES OF HIV LINKAGE-TO-CARE STRATEGIES

RESULTS

Arm	SOC (N=591)	POC CD4 (N=614)	POC CD4 + CF (N=603)	POC CD4 + TA (N=590)
90 day entry into care (self-reported)				
n (%)	298 (50)	316 (51)	331 (55)	49 (49)
HR (95% CI)	Ref	1.0 (0.9-1.2)	1.1 (0.9-1.3)	1.0 (0.9-1.2)
90 day entry into care (verified)				
n (%)	171 (29)	186 (30)	**226 (38)**	181 (31)
HR (95% CI)	Ref	1.0 (0.9-1.3)	**1.4 (1.1-1.7)**	1.1 (0.9-1.3)
180 day ART initiation (verified)				
n (%)	77 (13)	96 (16)	**108 (18)**	90 (15)
HR (95% CI)	Ref	1.2 (0.9-1.6)	**1.4 (1.1-1.9)**	1.2 (0.9-1.6)

RESULTS: Average per Participant Costs by Study Arm



*Other includes equipment, overheads, and training costs

RESULTS

Per 1,000 participants in each arm:

Costs & Effectiveness	SOC	POC CD4	POC CD4 + CF	POC CD4 + TA
Total Costs (2014 USD)	REF	$20,700	$77,300	$34,300
Incremental number of individuals linked to care or ART				
90 day entry-into-care	REF	14	**86**	18
180 day ART initiation	REF	26	**49**	23
Incremental Cost per individual linked to care or ART				
Cost per additional entry-into-care	REF	$1,480	**$900**	$1,910
Cost per additional ART	REF	$800	**$1,580**	$1,490

CONCLUSION

POC CD4 testing did not substantially improve timely entry into HIV care or initiation of ART in this study

Only POC CD4 + CF significantly improved timely linkage to care & ART initiation compared to SoC

- Most costly intervention to implement

Cost-effectiveness ratios of POC CD4 alone and POC CD4 + CF were similar

Additional research on cost-effective linkage interventions needed

Acknowledgements

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Any Questions?

LINKAGE-TO-CARE INTERVENTIONS