

Treatment Refusal in South Africa in an Era of Expanded ART Availability

Ingrid T. Katz, Janan Dietrich, Laura M. Bogart,
Dominick Leone, Ingrid Courtney, Gugu Tshabalala,
Garrett M. Fitzmaurice David R. Bangsberg,
Catherine Orrell,* Glenda Gray*

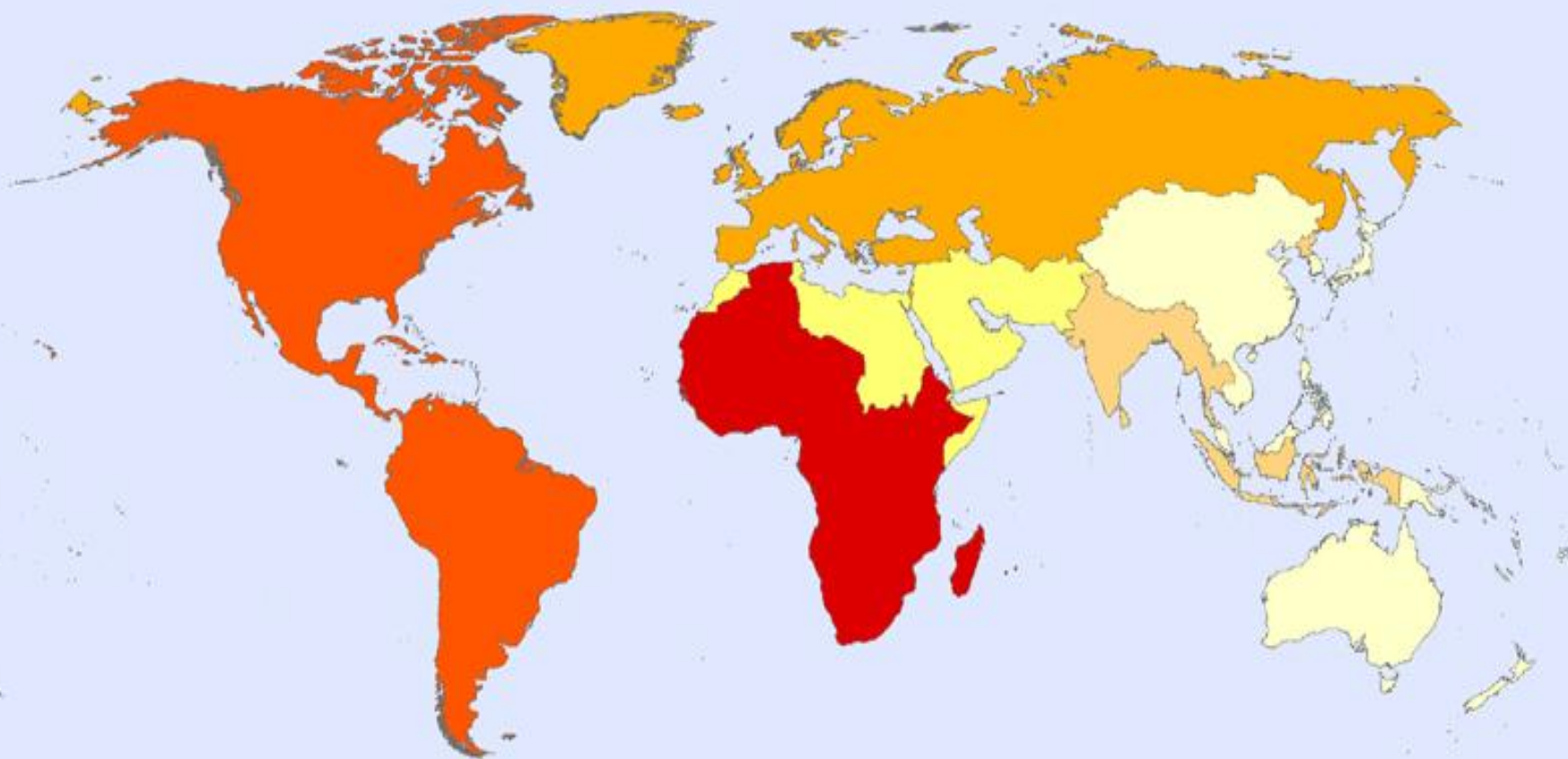
* Joint Senior Authorship



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Adult HIV prevalence (15–49 years), 2013 By WHO region



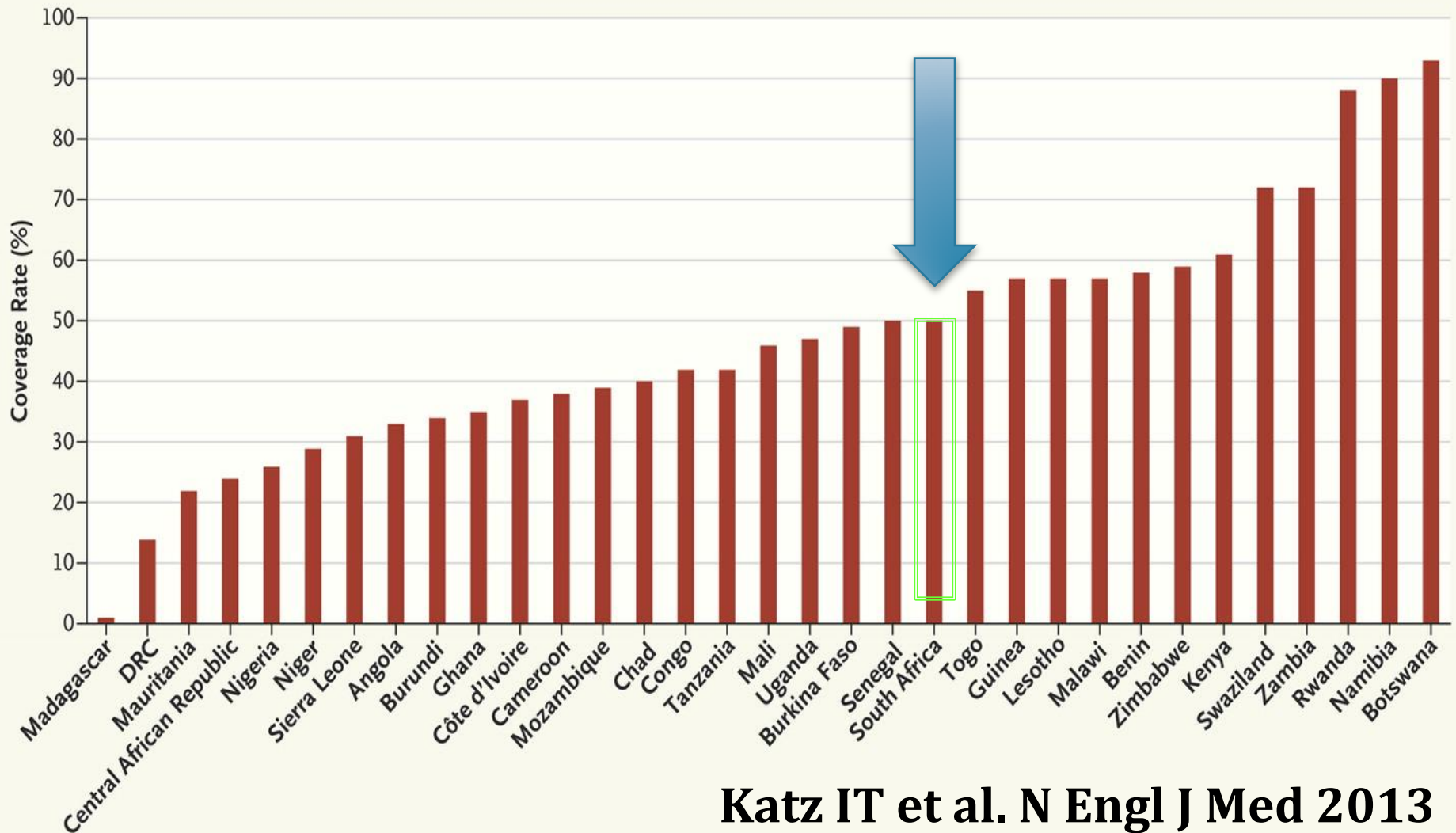
Prevalence (%) by WHO region

Western Pacific: 0.1 [0.1–0.1]	Europe: 0.4 [0.3–0.4]
Eastern Mediterranean: 0.1 [0.1–0.1]	Americas: 0.5 [0.4–0.6]
South-East Asia: 0.3 [0.3–0.4]	Africa: 4.5 [4.2–4.7]

Global prevalence: 0.8% [0.7–0.8]

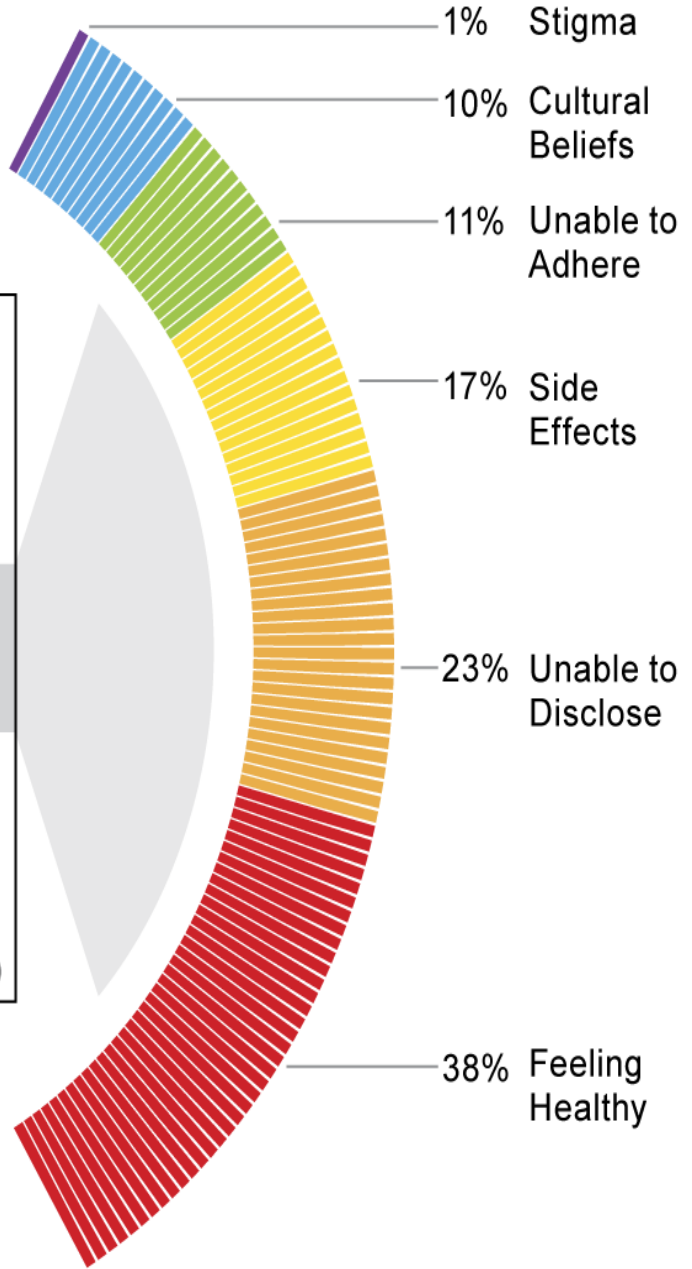
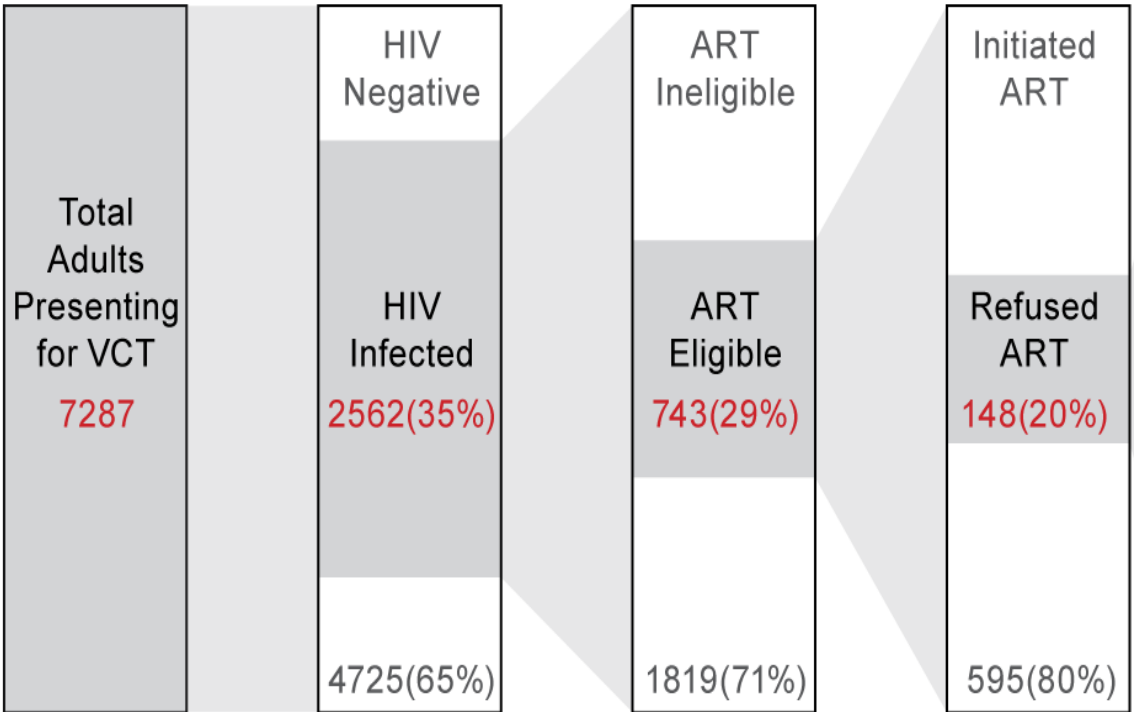
0 875 1,750 3,500 Kilometers

ART Coverage in Sub-Saharan African Countries, 2010



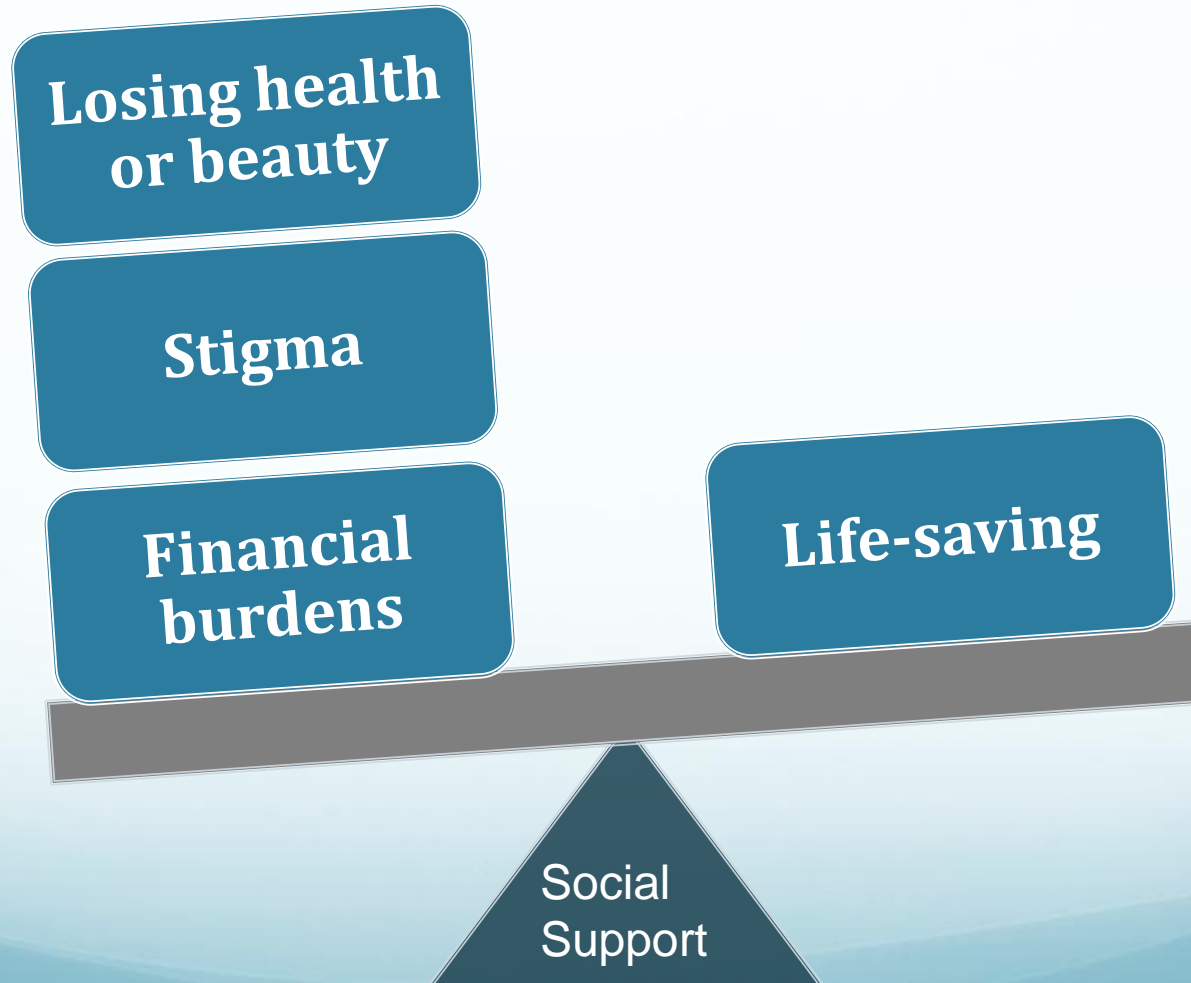
Katz IT et al. N Engl J Med 2013

Adults Presenting For VCT In Soweto



Perceived Risks

Protective Factors



Research Objective

- **Primary:** To determine the rate of ART refusal at the point of testing in the current era of expanded ART eligibility in South Africa
- **Secondary:** Identify correlates associated with ART refusal
- **Hypothesis** –Social factors would be more important drivers of ART decision-making than structural factors in an urban population

Study Sites: Soweto & Gugulethu



Design

- **Design: Cross-sectional survey**
- Administered a survey with detailed psychosocial measures to individuals presenting for CD4 results

Analyses

- Bivariate analyses were performed to identify patient factors associated with ART refusal based upon our prior research
 - Covariates with $p < 0.1$ were included in the multivariable model
- **Primary Outcome:**
 - ART refusal

Participants

- **400 ART-eligible adults presenting for VCT between July, 2014 – May, 2015**
 - 200 participants at each site
- **ART Eligibility: South African guidelines**
 - CD4 < 350 cells/mm³ before Jan 1, 2015
 - CD4 < 500 cells/mm³ after Jan 1, 2015
- **Excluded: pregnant women, children < 18 yrs**

Predictor Variables

- Socio-demographic characteristics
- Structural barriers to HIV care
- Mental health, stress and coping
- Self-assessment of health and quality of life
- Sexual and substance use risk factors
- Social support
- Stigma
- Knowledge, attitudes and beliefs

Participant Characteristics

Variable	<u>Total</u> n = 400	<u>Soweto</u> n = 200	<u>Gugulethu</u> n = 200	P- value
Median Age	35	35	35	0.37
Female	63 %	58 %	68 %	0.05
Median CD4	238	205	266	0.0003
Unemployed	58 %	60 %	56%	0.36
Repeat testers	67%	68%	66%	0.75
Repeat testers with a prior positive test	60%	68%	52%	0.002

Baseline Rate of ART Refusal

- **7% refusal rate at point of learning ART-eligibility**
 - Soweto: 10%
 - Gugulethu: 4%

Fatalism was Significantly Associated ART Refusal

Variable	Unadjusted		Adjusted	
	Odds Ratio	95%CI	Odds Ratio	95%CI
Denial	1.19	0.99 – 1.44	1.09	0.87 – 1.37
Stigma	1.28	1.04 – 1.58	1.16	0.93 – 1.46
Fatalism	1.16	1.02 – 1.32	1.21	1.04 – 1.40

Social Support Moderates Fatalism

	Low Social Support (n=28)		High Social Support (n=370)	
Variable	AOR	p-value	AOR	p-value
≥ High school education	1.48	0.64	0.40	0.22
Employed	1.07	0.92	1.04	0.94
Stigma	1.37	0.09	1.24	0.10
Fatalism	1.49	0.01	1.12	0.15

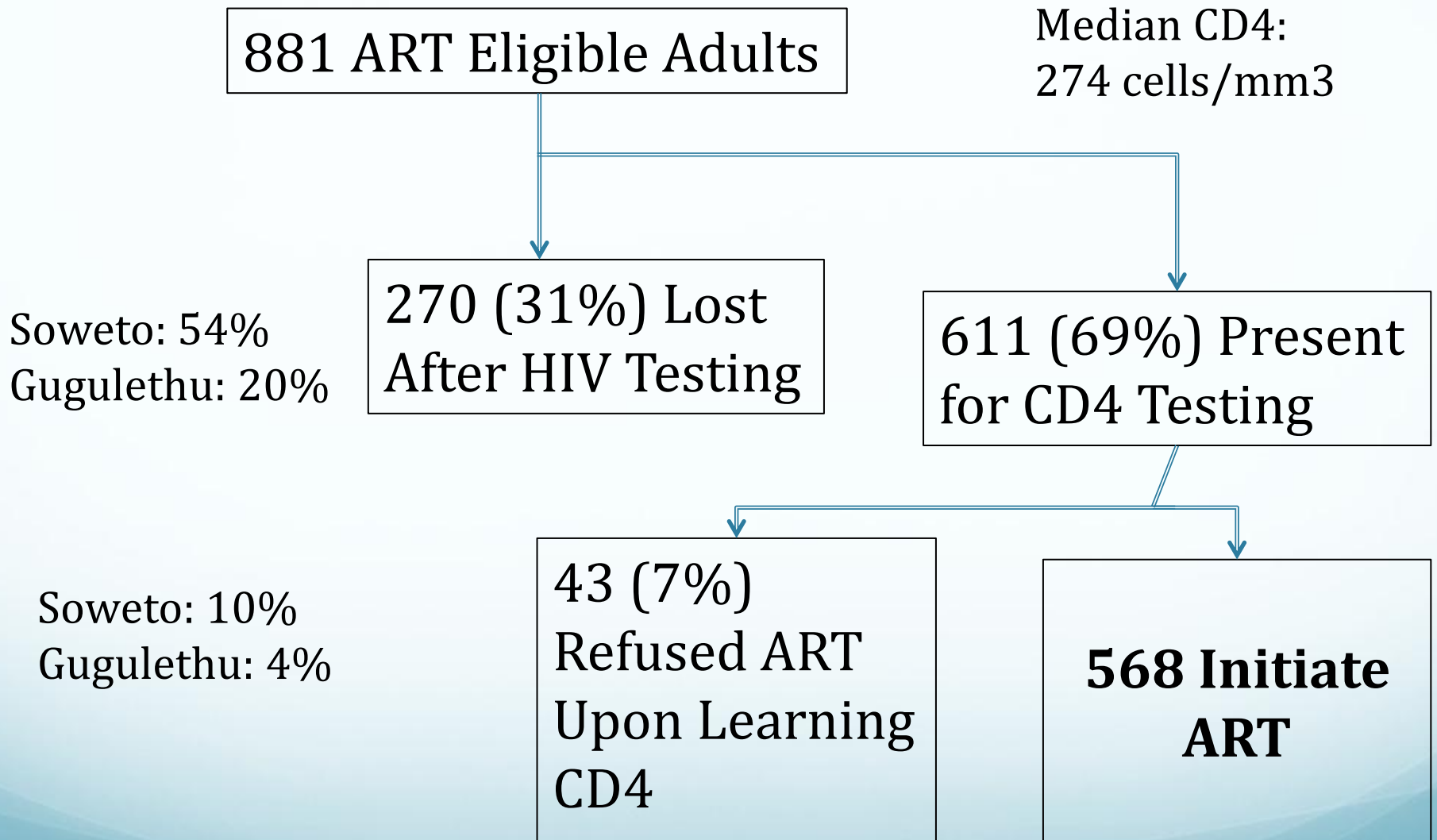
Implications

- Fatalistic world view associated with ART refusal
- Social support modifies the effect of fatalism on ART refusal
- Potential interventions:
 - Cognitive behavioral therapy or Motivational Interviewing
 - Increased social support

Follow-up Study

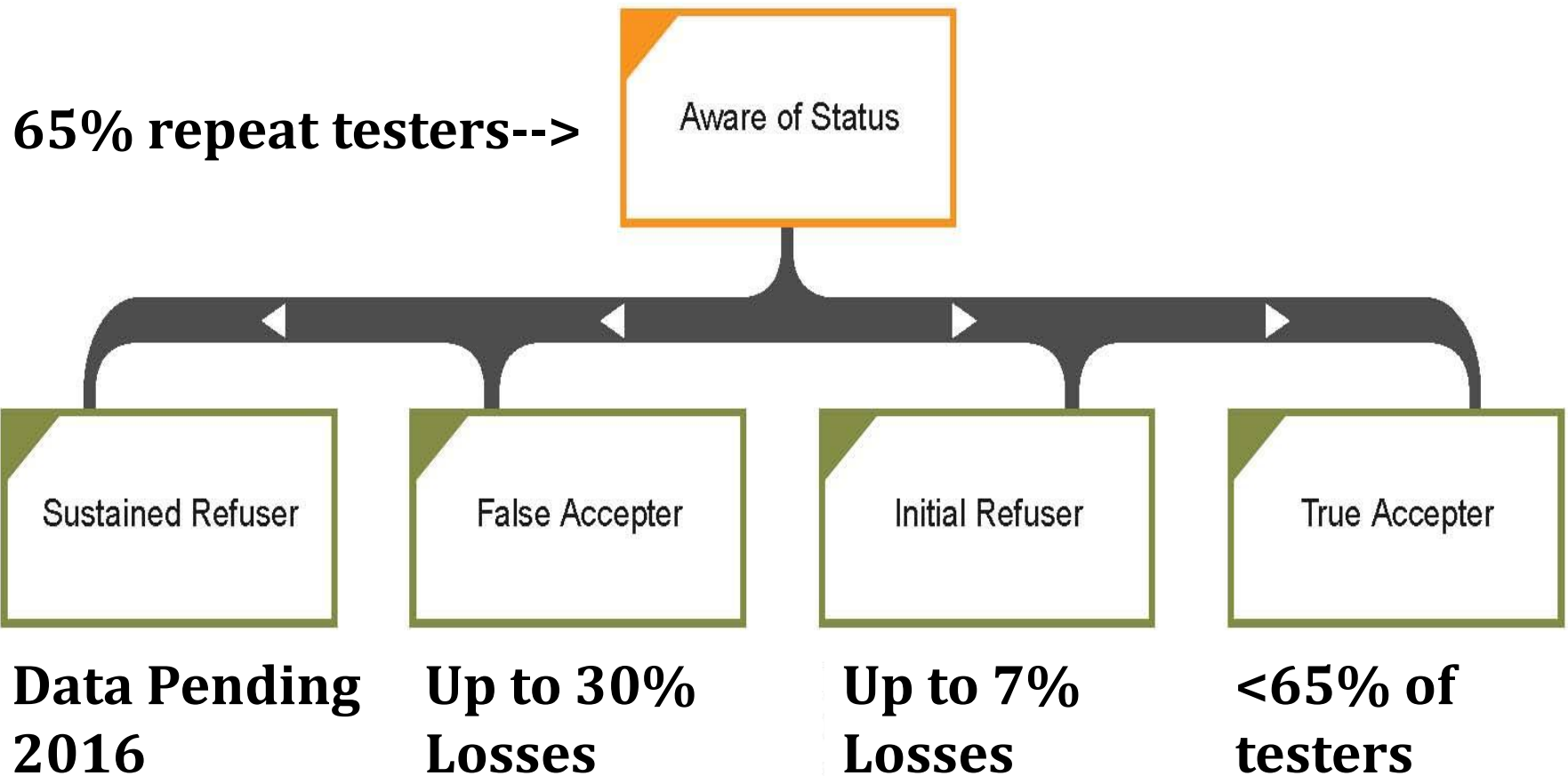
- Rates of ART refusal lower than expected
- Retrospective study to evaluate pre-ART losses between HIV testing and return for CD4 results
- Reviewed intake forms for all ART-eligible individuals who presented for testing but failed to return for CD4

Pre-ART Losses



Attrition: > 35% lost before starting ART

Impact of our findings on the continuum of decision making



Limitations

- Self reported ART initiation
 - NHLS data pending
- Longitudinal data pending
- Limited data in our retrospective analysis
 - Unable to fully characterize how this sample differs from refusers on key psychosocial factors

Conclusion: A Cascade of Losses

- > 2/3 of individuals presenting for testing are repeat testers; 60% report prior positive test
- >30% of individuals who test positive for HIV are lost after testing
- 7% refuse to initiate ART at the point of learning they were eligible for treatment

Future Directions

- Further characterize patients at each point of loss in pre-ART care continuum in order to design effective interventions to promote uptake of ART
- Understand how forces such as fatalism may be influencing decision-making and how to optimize social support in this population

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To the patients who share
their lives and choices with us

