



**For ever and ever amen: facilitators  
of adherence to antiretroviral  
therapy in Nairobi urban informal  
settlements**

**By : Eliud Wekesa  
Ernestina Coast**

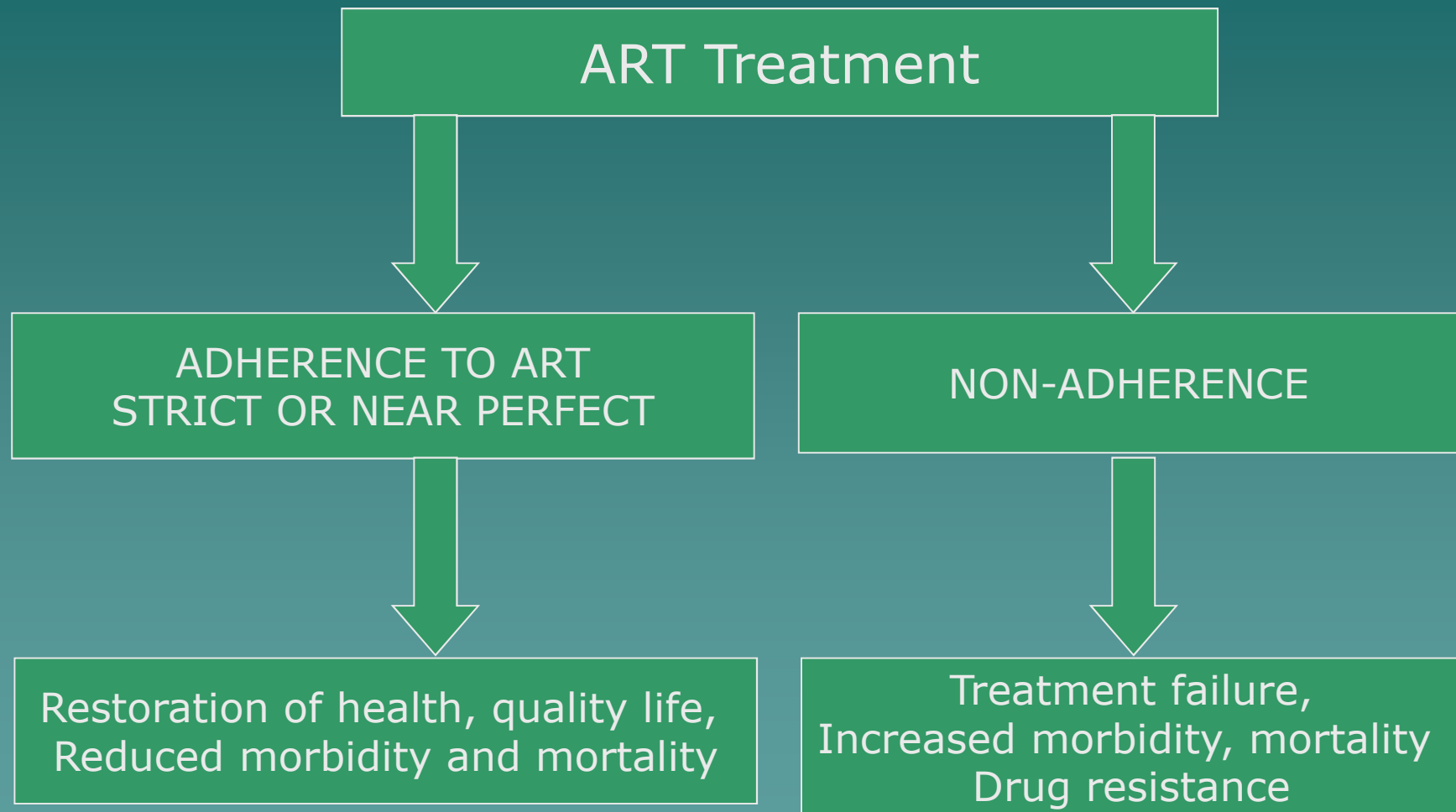
**Acknowledgements:**

**Wellcome Trust (GR078471MA)**

# Definitions

- ◆ ART= Antiretroviral treatment
- ◆ Adherence= the extent to which a person's behaviour in terms of taking medications, following a diet and executing lifestyle changes-follows agreed recommendation from health care provider ( WHO 2003)  
i.e Patient involved in the decision to take medicines correctly: right dose, right frequency, and right time.

# Why adherence?



# Evidence: Adherence Success in SSA?

- ◆ Expectation of poor adherence in SSA –poverty interactions
- ◆ But, adherence in SSA is better than Global North
- ◆ Meta-analysis (Mills *et al*, 2006)
  - SSA=77% adherent
  - North America=55% adherent

**Research question:** What factors are associated with ART adherence in resource-poor setting?

# Study setting and methodology

## ◆ **Methods:**

- Questionnaire (n=233)
- In-depth interviews (n=54)
- Key informant interviews (N=10)
- Recruitment: PLWHA civil society, community.

## ◆ **Sites:** APHRC Nairobi DSS sites

- Viwandani
- Korogocho

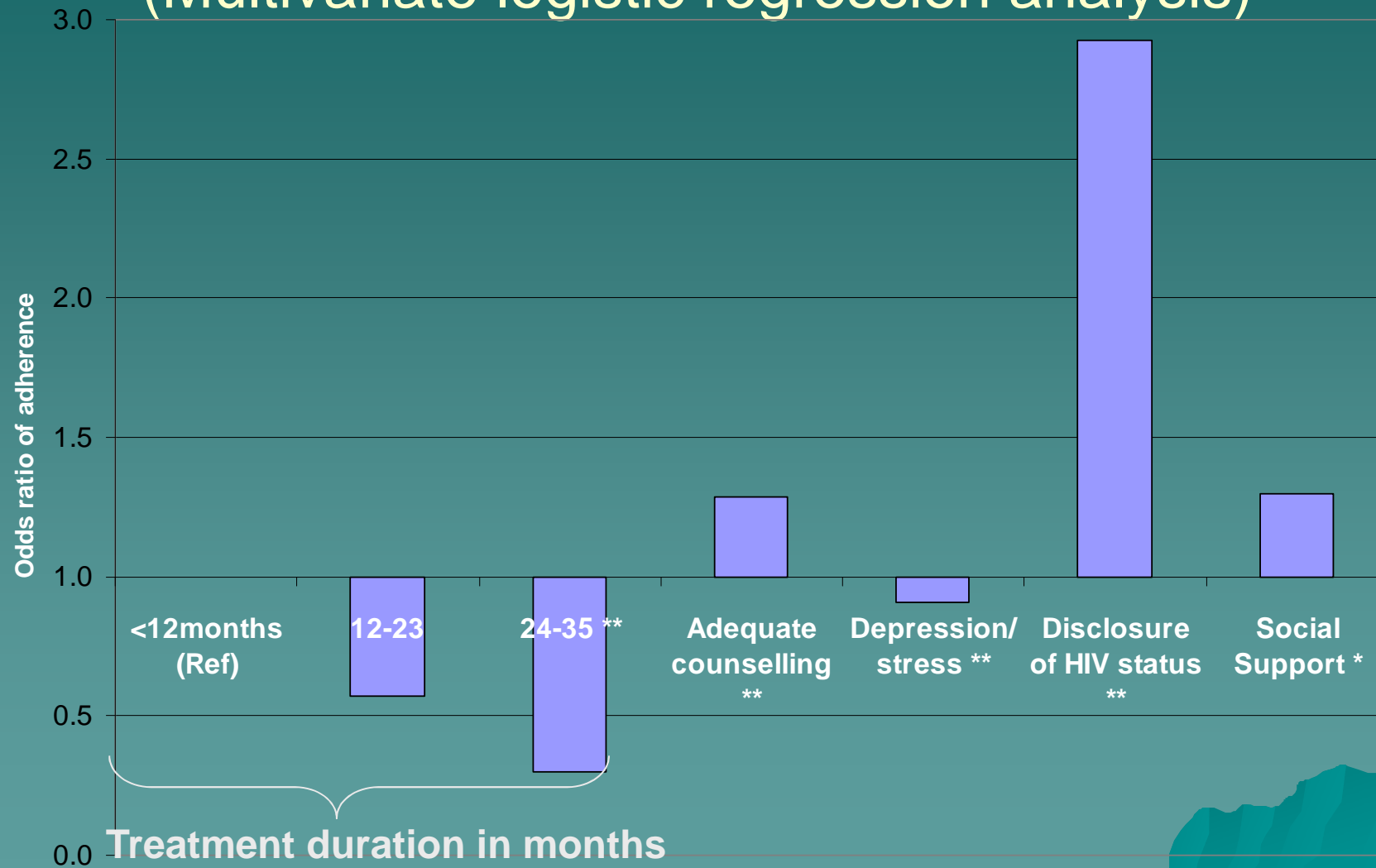
## ◆ **Measurement** : Self report; perfect adherence=71%

# Explanatory factors

<b>Variables</b>	<b>Description</b>	<b>Items on scale</b>
Adherence counseling/ adherence education	Index	12
Self- efficacy	Index	8
Doctor/patient relationship	Index	8
Psychological distress	Index	10
ART/HIV knowledge	Index	8
Social support	Index	8
Side effects	Index	12
Alcohol and drug use	Dichotomous	
Disclosure of HIV status	Dichotomous	
Adherence	Dichotomous	
Age, sex, schooling, ethnicity, marital status	Categorical	

# Significant predictors of adherence

(Multivariate logistic regression analysis)



Significance level \*\*\* < 0.001; \*\* < 0.05; \* < 0.1

# Qualitative results (content analysis) collaboration

## Adherence counselling/education:

- ◆ “..yes, they did tell me...they counselled me on how to take them and keeping time.....they train you for a whole week” (ART User Korogocho)

“they go for counselling, after they go for treatment,... they are asked how do you take your drugs so they point each, each,.... each time they come here it is indicated... there is this place for remarks-they are the ones we read and know where to lay more emphasis, where to correct” ( Health care worker Viwandani)



# Qualitative results (content analysis) collaboration

## Disclosure of HIV status:

- ◆ “We prefer the patients to come with their guardians-treatment supporter.. but then they don't understand why they should come with a treatment supporter, they feel they should not disclose to their families” (health care provider Korogocho)

## Social support:

- ◆ “My Auntie, mama, my young brother here who comes over to check what's cooking so we can share. The first thing he and others ask at 9 o'clock is whether I have swallowed the drugs” (ART user Korogocho)

## Further dimensions revealed by qualitative analyses

- ◆ 1. obeying health care providers instructions without question:

“.. people have different views but I will take the doctor's word because it's the doctor who knows how I am using the drugs, blood parameters-that is the one I will believe because he knows all and is my "tutor" (ART user viwandani

- ◆ 2. Easy to remember time for drug intake:

“ At 8.00 am and 8.00 pm... Sometimes I take the medications before eating because when its 8'oclock..., I just take the medications”. (ART user Korogocho)

“At 10.00am and at 10.00pm.. one in the morning and 2 at night” (ART user Viwandani)

## Further dimensions revealed by qualitative analyses.....

### ◆ 3. Belief in the effectiveness of ART:

“Yes, like me when I got the infection, I was bed-ridden was not where I am now, was not able to walk from my bed. After taking the drugs...I’m well” (ART user Korogocho)

### ◆ 4. Self motivation

“..For ever and ever amen (laughter)  
..throughout...Till the end. Unless God comes in another way”. (ART user, woman Viwandani)

# Discussion

- ◆ Study adherence level of 71% adds credence to evidence that adherence rates can be high
- ◆ Programmatic implications – little room for complacency
  - Adherence decline with time
  - Sustainability of free treatment
- ◆ Individual-level characteristics were not significantly associated with adherence, including factors identified as important in resource-rich settings:
  - Alcohol and drug use
  - Side effects
  - Self-efficacy not significant here.
- ◆ Reason = determinants of adherence in SSA go beyond the individual and treatment to encompass the social environment i. e support

# Conclusions

- ◆ To understand determinants of adherence in a resource-poor setting we need to go beyond individual and treatment factors
- ◆ Need to include the wider social environment
  - Adherence is not an individual, one-off event, but a communal process involving
    - ◆ Other PLWHA
    - ◆ Families
    - ◆ Kin and social groups
    - ◆ Health care providers
- ◆ With support, urban poor residents in the developing world can also achieve optimal adherence levels.
- ◆ Early fears of “antiretroviral anarchy” in these settings appear unfounded.