Factors Associated with Non-Adherence to Antiretroviral Therapy among Patients Attending HIV Care and Treatment Clinics in Kenya, Namibia, and Tanzania
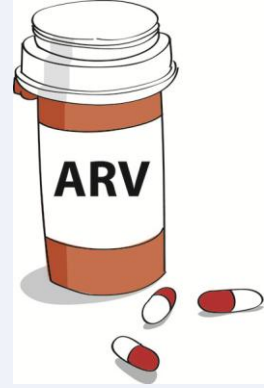
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Introduction

- Antiretroviral therapy (ART) reduces:
  - morbidity and mortality of HIV-positive patient
  - risk of HIV transmission to uninfected partner(s) and child(ren)
- Treatment efficacy relies on sustained adherence
- Concerns have been raised about suboptimal ART adherence among patients enrolled in HIV clinical care

Purpose of Current Study

- Among HIV-positive patients enrolled in HIV care and treatment clinics:
  - Describe self-reported adherence to ART medication in the past 30 days, and
 - Identify factors associated with incomplete/non-adherence
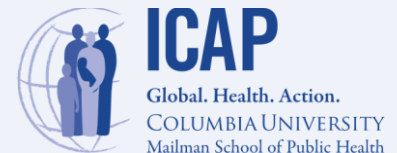
Study Design

- Group-Randomized Trial

- Evaluated impact of a clinic-based HIV prevention intervention

- Included 18 clinics in Kenya, Tanzania, and Namibia (6 per country)

- Clinics were paired on clinic characteristics (e.g. size, patient/provider ratio) and randomized

Study Design (cont'd)

- Enrolled approximately 200 sexually active HIV-positive patients at each clinic

- Patient interviews conducted at baseline and 6- and 12-months post-intervention

- Other data sources include:
  - Medical chart reviews
  - Clinic records
  - Questionnaires: health care provider (HCP)/lay counselor (LC)
  - Observations of patient visits with HCPs and LCs

- Presentation today reports on analysis of baseline data
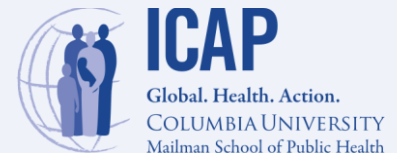
Dependent and Independent Variables

- **DV**: Self-reported non-adherence to ARVs (≥ 1 missed dose of ARVs in past 30 days)
  - Asked for each medication patient was taking
- **Independent variables from questionnaire:**
  - Socio-demographics (age, gender, education, country, transportation cost to clinic)
  - Disclosure
  - HIV care (on contrim, met with counsellor, length of time on ARVs)
  - Awareness of CD4 count

Dependent and Independent Variables (cont'd)

- **Independent variables from questionnaire:**
  - Depressive symptoms (CES-D)
  - Alcohol use (AUDIT)
  - Physical and mental functioning (SF-8)
  - Social support
- **Data abstraction from clinical data:**
  - CD4 count
  - ART regimen
- **All variables entered into multiple logistic regression model**
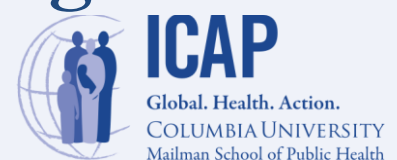
Characteristics of Patients on ART

- 3,538 patients enrolled (60% on ART)

- Of the 2,123 patients on ART:

  - 47% male

  - Median age: 37 years (IQR: 32-42)

  - 64% had primary education or lower and 45% had paid work in past 6-months

  - Mean CD4 count: 347 cells/mm^3 (SD 248)

  - Median time on ART: 21 months (IQR 9-34)

  - 96% had disclosed (87% to household member)

  - 18% reported alcohol use in past 6-months (13% non-problem, 5% harmful/likely dependent)

  - Mean CES-D score: 11.3 (SD 10.6)

Factors Associated with Non-Adherence

- 14% reported missing ≥1 dose of ARVs in past 30 days

	N(%) non-adherent	Multiple regression model
Age*		
18-29	61 (22.1)	Ref
30-39	132 (13.1)	0.59 (0.40, 0.87)
40-49	83 (12.6)	0.61 (0.39, 0.95)
>50	27 (14.8)	0.91 (0.50, 1.64)
Alcohol Use*		
Non-drinker	201 (11.5)	Ref
Non-problem drinker	64 (22.5)	2.15 (1.50, 3.06)
Harmful drinker	24 (42.1)	4.27 (2.30, 7.93)
Likely dependent	14 (43.8)	3.90 (1.76, 8.63)
CES-D*		1.03 (1.02, 1.04)

*p<0.05, ***p<0.001

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Conclusion

- Patients reported high rates of ARV adherence

- Patient characteristics associated with non-adherence include alcohol use, depressive symptoms, and younger age

- Patients with these characteristics may need to be targeted for additional adherence counseling and support.
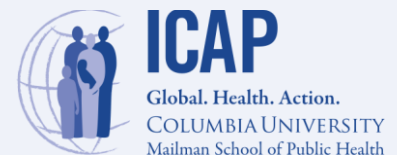
Alcohol Screening and Counseling an Important Part of Adherence Support

- Findings also highlight need to:
  - screen patients in HIV clinical care for current alcohol use
  - provide alcohol reduction counseling to those who report current use as part of routine care
  - refer patients categorized as harmful drinker/likely dependent to alcohol reduction programs, where available
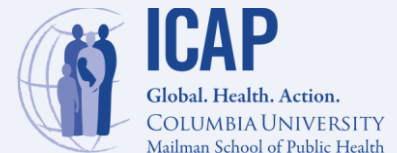
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- Field teams (data collection and entry)
- Study participants