

# Social Support Improves Attendance to Outpatient HIV Medical Appointments for Low Health Literate Patients

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# Health Literacy & HIV/AIDS

- HIV/AIDS disproportionately affects -
  - Racial/ethnic minorities
  - Lower SES
- At risk for low health literacy
- Low health literacy related to suboptimal medication adherence (Kalichman et al., 2008; 2007; 1999; Osborn et al., 2007; Waldrop-Valverde et al., 2008; 2009; 2010; Wolf et al., 2007)
- Broader scope of treatment adherence
  - Access
  - Retention
  - Appointment adherence

# Problem of Poor Retention in HIV Care

- Missed medical appointments can lead to –
  - AIDS defining illness & opportunistic infection
  - Unsuppressed viral load
  - Increased mortality (*Park et al., 2006*)
- May also lead to increased HIV transmission, further fueling the epidemic
- Not known if low health literacy is a risk for poor attendance at routine HIV medical appointments

# Study Aims

- Primary Question:
  - Is low patient health literacy associated with poorer attendance at routine HIV medical appointments?
- Secondary Questions:
  - What other characteristics may confer protection for missed medical appointments if low health literate?
    - Social Support
    - Communication with Provider
  - What other characteristics may confer risk for missed medical appointments?
    - Substance Use
    - HIV Associated Neurocognitive Impairment

# Participants

- Participants recruited from inner city HIV clinics in South Florida
- Exclusion criteria
  - Non-English speaking
  - Unable to verify enrollment in a recruiting clinic
  - Enrolled in a clinical trial
- Consent post-testing to ensure valid informed consent of a vulnerable population

# Data Collection Points

Baseline Interview

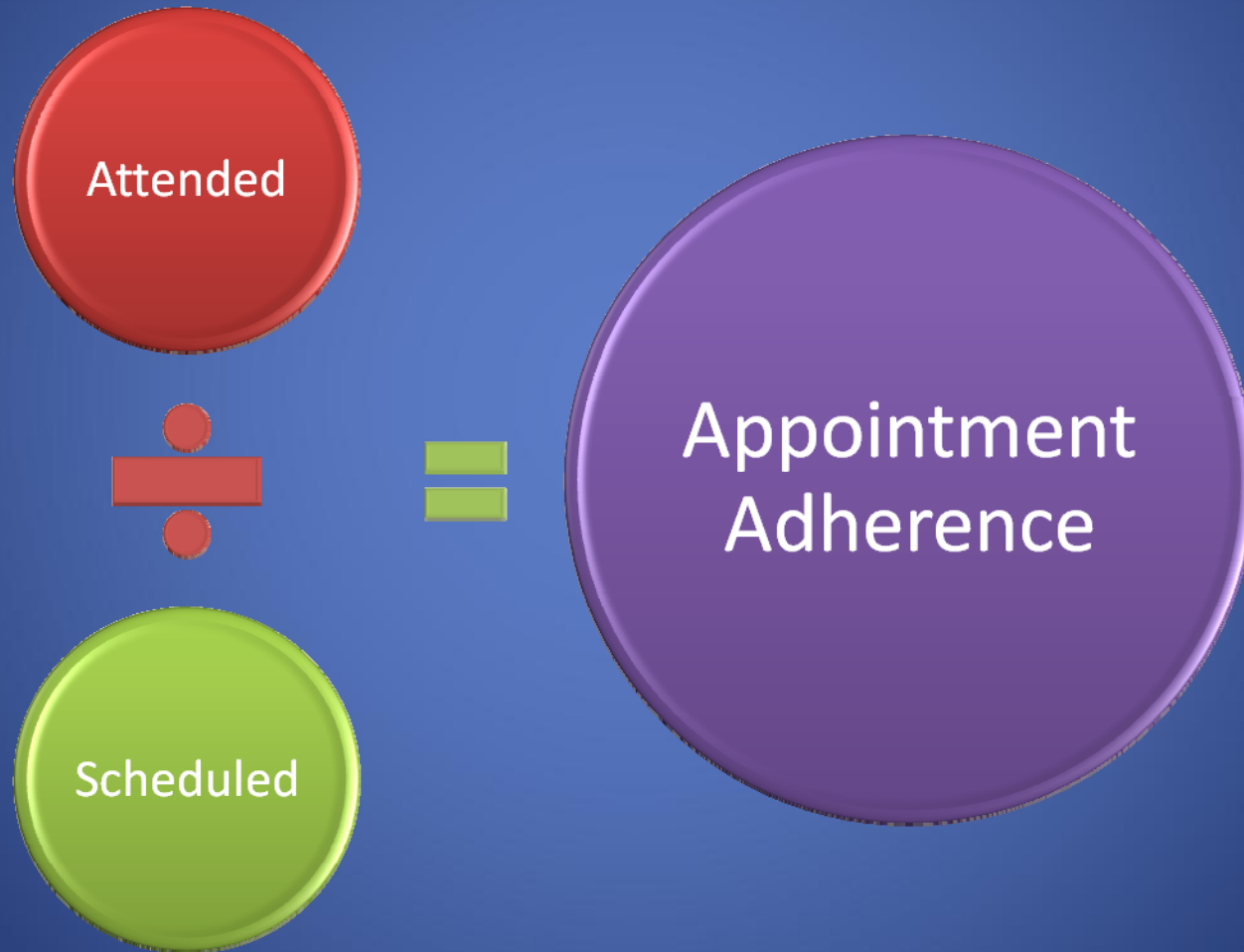


28 weeks/MRA



Follow-up Interview

# Outcome Measure



# Measures

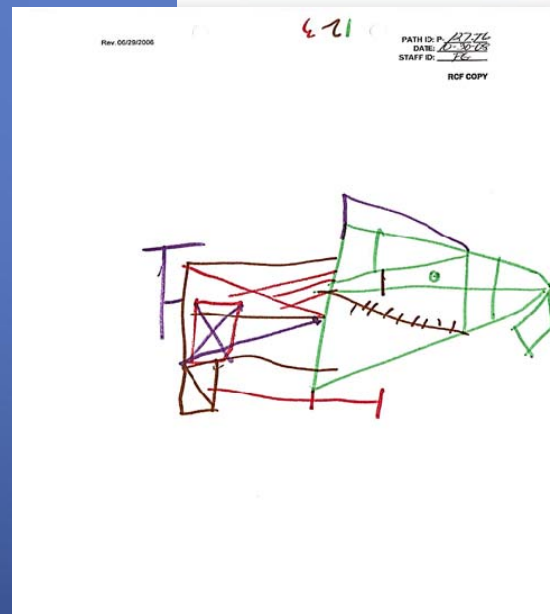
- Health Literacy
  - S-TOFHLA (Baker et al., 1999)
    - Total correct
- Provider Communication
  - Engagement with Provider Scale (Bakken et al., 2000)
    - My doctor...listens to me
- Social Support
  - Social Support Questionnaire (Zich & Temoshok, 1987)
    - Desirable
    - Available
    - Experienced (used)
    - Useful



# Measures

## Neurocognitive Testing

- Standardized neuropsychological test battery
- Test scores were divided into the domains of
  - Attention
  - Memory
  - Psychomotor
  - Executive



# Measures

- Substance Use
  - Single item
    - Use of alcohol or drugs last 28-weeks (0=no, 1=yes)
- HIV Viral Load
  - Detectable vs. Undetectable
- CD4 cell count/mm<sup>3</sup>



# Participants

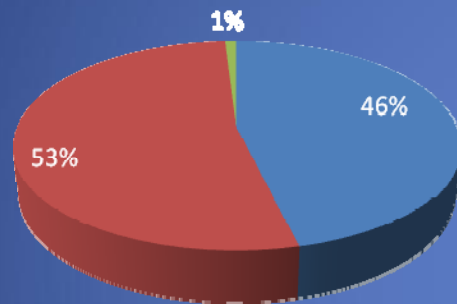


- Enrolled 210
- MRA 206
- 197 Follow-up (94%)
- 95% prescribed antiretroviral meds
- Average age was 47
- Average years of school completed was 11
- 502 CD4 cells/mm<sup>3</sup> (median)

# Participants

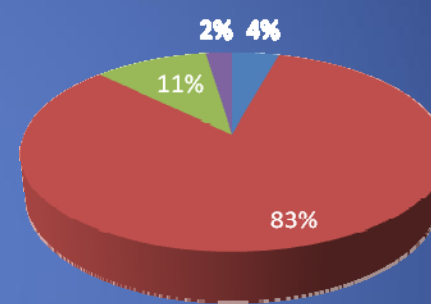
## Gender

men women transgender

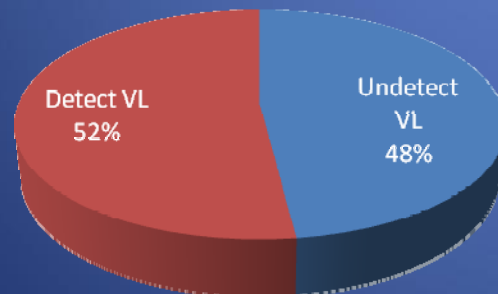


## Race/Ethnicity

White Black Hispanic Other

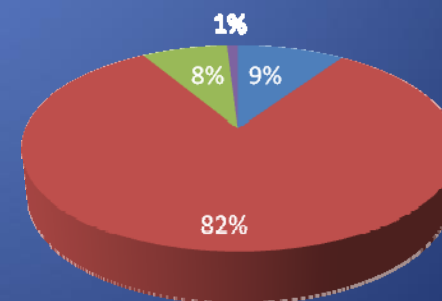


## HIV Viral Load



## Sexual Orientation

gay heterosexual bisexual don't know





# Participants

- **76%** average appointment adherence
- **32%** missed NO appointments
- **79.46%** - Average S-TOFHLA scores
- **20.5%** -inadequate health literacy

# Bivariate Analysis

	Appointment Adherence
Age	<b>.150*</b>
Substance Use	<b>-.140*</b>
CD4	-.031
Detectable VL	-.007
Social Support	<b>-.208*</b>
Health Literacy	<b>-.125*</b>
Executive	-.029
Attention	-.108
Memory	.075
Psychomotor	-.051
Provider communication	-.068

\*  $p < .10$

# Multiple Regression

Variables	
Age	.206 (.672)*
Substance use	-.131 (-6.327)
Health Literacy	-.118 (-.139)
Used Social Support	-.157 (.488)*
R <sup>2</sup>	.118*

*Note: Results are presented as Beta values with B values in parentheses.*

\*  $p < 0.05$

- Primary Question:
  - Is low patient health literacy associated with poorer attendance at routine HIV medical appointments?
- **NOT supported by these findings**



# Test of Mediation

- Social Support mediates the relationship between health literacy and appointment adherence



\* $p < 0.05$

- Secondary Questions:

- What other characteristics may confer protection for missed medical appointments for low health literacy?

- Social Support

- Communication with Provider

- What other characteristics may confer risk for missed medical appointments?

- Substance Use

- HIV Associated Neurocognitive Impairment

# Conclusions and Implications

- Focus on social support as a means to retain HIV patients in care
  - Helpful for those with lower levels of health literacy as measured by the TOFHLA
- Peer navigators in HIV care proven effective
  - Findings may support such interventions for low health literate

# Future Directions

- What are the specific elements of social support most effective?
  - Emotional support
  - Information giving
  - Physical support (e.g., transportation, childcare)
- What other mechanisms may drive the relationship?
  - Self-efficacy
  - Mood
- System characteristics to facilitate/impede positive effects of social support?

Thank you

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