

# ROLE OF BEHAVIORAL ALCOHOL RESEARCH IN THE DESIGN OF BIOMEDICAL HIV PREVENTION INTERVENTIONS: DISCUSSION

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SARAH E. WOOLF-KING, PHD, MPH  
ASSISTANT PROFESSOR  
DEPARTMENT OF PSYCHOLOGY  
SYRACUSE UNIVERSITY  
K01AA021671, NIH/NIAAA



# Summary of Future Research Directions

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To enhance biomedical HIV treatment and prevention, behavioral alcohol research should:

- I. Continue to develop & implement alcohol interventions for PLWH
- II. Continue to conduct research on sexual behavior under conditions of alcohol intoxication
- III. Increase research on mechanisms underlying the alcohol-ART adherence association



# I. Continued development & implementation of alcohol interventions for PLWH



# I. Alcohol interventions for PLWH: Potential impact

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Biomedical implications of reducing alcohol use:

- Improve ART & PReP adherence
- Improve achievement of viral suppression
- Decrease alcohol-associated sexual risk behavior
- Reduce impact of HIV-related medical, psychological, & behavioral comorbidities
- Reduce mortality

\*\*Reducing alcohol use has the potential to impact every stage of the HIV care continuum – from likelihood of HIV transmission/acquisition to treatment efficacy and mortality\*\*



# I. Alcohol interventions for PLWH: What's been done?

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- N = 8 RCTs of interventions for PLWH w/at-risk alcohol use
- Efficacious behavioral alcohol interventions for PLWH
  - Chander et al., 2015: 2 BIs + 2 boosters, HIV+ clinic pts (women) in Baltimore
  - Hasin et al., 2013: 1 BMI + 2 boosters + 60 days IVR, HIV+, alc dep, in NYC
  - Papas et al., 2011: 6 sessions, group CBT, HIV+ clinic pts in Kenya
  - Velasquez et al., 2009: 8 sessions (4 indiv MET, 4 groups), HIV+ MSM with AUDs



# I. Alcohol interventions for PLWH: Future intervention research

- I. Be brief, clinic-based, and targeted intervention
- II. Produce significant impact (e.g., 10% reduction in alcohol use per day and percent of PLWH)
- III. Produce positive outcomes for PLWH
- IV. Use brief, self-referenced interventions to complement existing interventions
- V. Address “clustered risks” (Williams et al., 2016); “unique” needs of PLWH.
  - E.g., “third wave” interventions, multiple behavior change approaches, multiple behavior change interventions

“Problems related to alcohol in HIV-infected people are abundant, effective interventions are few, and new ones are urgently needed”

~Samet & Walley, 2010, p. 275



## II. Research on sexual behavior under conditions of alcohol intoxication

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- U.S.-based literature has evolved from cross-sectional, global association studies, to intensive longitudinal, and experimental research designs
- The literature in parts of the world most affected by alcohol and HIV (e.g., SSA) has not
- Only six event-level studies in SSA, two of which have collected prospective daily data
  - No event-level literature with high risk sub-groups in SSA (e.g., MSM, FSW)
- No experimental studies in SSA (30 studies in the US/Can/UK; Scott-Sheldon et al., 2016)
  - IRB approval and funding for alcohol administration studies may be more challenging in these contexts
  - Experiments are still possible! (e.g., vignettes, risk exposure tasks)





### III. Research on mechanisms underlying the alcohol-ART adherence association

# III. Research on Alcohol & ART adherence: Gaps in the literature

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- Over-reliance on global association studies
  - Small number of studies that establish temporal co-occurrence (i.e., event-level)
  - No experimental studies
- Heterogeneity in time frames and methods of assessment
  - Adherence (e.g., missed doses in last 7 days, 3 days, month; 90 vs 100%)
  - Alcohol use (Q/F, HDE, last month, 2 months, past year, 3 months)
- Lack of theory-driven work

# III. Research on Alcohol & ART adherence

## Future research directions

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- Literature should follow a similar path as the alcohol-sexual risk literature
  - Global association → situational association → event-level → experimental
- Application of theoretical models (e.g., alcohol myopia) and designs that can test for hypothesized mechanisms, moderators, and confounders
  - Cognitive impairment from acute alcohol intoxication
  - Interactive toxicity beliefs (Kalichman), Gender (Hendershot et al., 2009)
  - Avoidant-oriented coping (Weaver et al 2005; Cerea et al., 2017; Cooper et al., 1992)
- Increased use of objective measures of adherence (e.g., ART in hair) & standard alcohol assessments of heavy episodic drinking



# In closing

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- Efficacy of biomedical HIV interventions is significantly impacted by alcohol use
- Biomedical HIV treatment and prevention interventions must consider:
  - How (i.e., the mechanisms) alcohol use affects adherence & sexual behavior
  - The integration of alcohol interventions into biomedical interventions
- Alcohol interventions for PLWH should:
  - Produce clinically and statistically significant changes in quantity alcohol use and adherence that are maintained over time
  - Address co-occurring behavioral and psychological issues
  - Be delivered in tandem with biomedical HIV treatment and prevention



Questions and Discussion!