SEARCH Test & Treat Intervention Improves Viral Suppression Among Hazardous Drinkers

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BACKGROUND

- Hazardous alcohol use has been associated with poor HIV care cascade outcomes
- We previously reported that hazardous drinkers had lower baseline viral suppression than non-drinkers in the SEARCH universal test and treat (UTT) trial communities

OBJECTIVES

- To determine if the SEARCH UTT intervention improved viral suppression compared to control among hazardous drinkers.
- To assess if gaps in viral suppression persist between hazardous drinkers and non-hazardous/non-drinkers in intervention and control communities after 3 years

METHODS

Study Population & Design:

- The SEARCH trial (NCT 01864603) randomized 32 communities in Kenya and Uganda to a:
  - **Intervention** of annual HIV testing and universal ART eligibility via streamlined care designed to decrease barriers to engagement in care and viral suppression

  OR
  - **Control** of baseline universal testing with ART eligibility and delivery by evolving country standards over 3 years (2013-17)
- We evaluated baseline HIV+ adults (≥15 years of age)

Primary Outcome:

- Viral suppression at year 3

Exposure Variables:

- We assessed baseline alcohol use by Alcohol Use Disorders Identification Test-Concise (AUDIT-C) score:
  - **Hazardous drinkers** were defined as having an AUDIT-C score ≥3 for women and ≥4 for men
  - **Non-hazardous/Non-drinkers** were defined as an AUDIT-C score of 0-2 for women and 0-3 for men

Analytic Methods:

- Between arms: Cluster-level Targeted Maximum Likelihood Estimation (TMLE) compared year 3 viral suppression between hazardous drinkers in control and intervention
- Within trial arms: Individual-level TMLE estimated associations between hazardous alcohol use & year 3 viral suppression, adjusted for sociodemographic factors, mobility and clustering by community.

Universal HIV testing & treatment with streamlined care improved viral suppression for hazardous drinkers and reduced the difference in viral suppression between hazardous drinkers and non-drinkers

RESULTS

- 12,123 HIV+ adults with baseline AUDIT-C measures, 1895 (16%) reported alcohol use:
  - 898 (47%) had non-hazardous use and 997 (52%) had hazardous level alcohol use
- Hazardous drinkers in intervention communities were more likely to achieve viral suppression than hazardous drinkers in control communities (RR 1.21, 95%CI: 1.10-1.34, p<0.001)
- Year 3 viral suppression by trial arm:
  - Control: Hazardous drinkers had significantly lower viral suppression vs. non-hazardous/non-drinkers (aRR of 0.93, 95% CI:0.87-0.99, p=0.04)
  - Intervention: Hazardous drinkers' viral suppression *not* significantly different than non-hazardous/non-drinkers (aRR: 0.95, 95%CI:0.9-1.01, p=0.10)

Characteristics of participants

	Full cohort (n=12,123)	Non-hazardous/ Non-drinkers (n=11,126)	Hazardous drinkers (n=997)
Male Sex	4316 (36%)	3575 (32%)	741 (74%)
Age (median, IQR)	36 (28-44)	35 (28-44)	38 (31-45)
Mobility	1934 (16%)	1716 (15%)	218 (22%)
Alcohol use			
None	10,228 (84%)	10,228 (92%)	--
Non-hazardous	898 (7%)	898 (8%)	--
Hazardous	997 (8%)	--	997 (100%)

RESULTS (cont.)

Proportion achieving viral suppression at year 3, by SEARCH trial arm and baseline hazardous drinking among persons with HIV*

	Control % (95% CI)	Intervention % (95% CI)
Non-hazardous/ Non-drinkers	82% (81-84)	90% (88-91)
Hazardous drinkers	77% (71-82)	85% (81-90)
	aRR 0.93 (0.87-0.99, **p=0.04**)	aRR: 0.95 (0.90-1.01, p=0.10)

*Individual-level TMLE analysis. Adjustment set included: sex, age, mobility, marital status, education level, occupation, and wealth quintile

SUMMARY

- The SEARCH intervention reduced the gap in viral suppression between baseline hazardous drinkers and non-hazardous/non-drinkers, achieving high prevalence of viral suppression regardless of alcohol use in the intervention arm
- Hazardous drinkers in intervention communities were more likely to achieve viral suppression than hazardous drinkers in control communities

CONCLUSIONS

- The SEARCH intervention of streamlined care may have decreased barriers to HIV care and viral suppression for hazardous drinkers

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