Poster 0867

HIV+ PERSONS IN RURAL UGANDA WITH FEWER SOCIAL CONNECTIONS HAVE LOWER HIV SUPPRESSION

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BACKGROUND

- **Social networks** of HIV+ persons may facilitate access to HIV testing and engagement in HIV care.
- We built community-wide (sociocentric) social networks rural Ugandan communities in the SEARCH Study (NCT01864603).
- We assessed associations between social connectedness and knowledge of HIV status, ART use, and HIV viral suppression among baseline HIV+ residents.

METHODS

SEARCH:

- Adult (≥ 15 years) residents in 20 rural communities in Uganda (10 in Uganda West, 10 in Uganda East) were enumerated during a baseline census between 2013-2014 as part of SEARCH test-and-treat.
- At study baseline: 89% of adults were tested for HIV; HIV+ adults has plasma HIV RNA measured

Social Networks:

- Enumerated residents were asked to name (up to 6) social contacts in 5 domains (food, money, health, free time, emotional support)
- Named contacts were matched to enumerated participants to build social networks

Study population:

- HIV+ adults who named at least one contact in the census

HIV cascade care Outcomes:

- Knowledge of HIV status, ART Initiation, Viral suppression (Plasma HIV RNA < 500 cps/ml)

Exposures:

- “in-degree”: number of times one was named as a contact
- ”out-degree”: number of contacts one named

Statistical analyses

- Generalized estimating equations (log link and cluster robust standard errors)
- Adjusted for age, marital status, mobile resident, wealth index, and occupation.

Socially isolated HIV+ persons in Uganda were less likely to be **diagnosed**, to have initiated **ART**, and to have **viral suppression.**

RESULTS

- 57% of named, within-community contacts in Uganda West and 63% in Uganda East were matched to enumerated residents, resulting in 20 networks with **108,521 nodes** (enumerated persons) and **216,213 edges** (social connections)
- HIV+ persons in the lowest tercile of in-degree (**<1-2 contacts**) were less likely than those in the highest tercile **(3-7 contacts**) to:
  - o Know their HIV status:
    - o Uganda West aRR:0.89 (95%CI:0.83, 0.96), Uganda East aRR:0.85 (0.76, 0.96)
  - o Have initiated ART:
    - o Uganda West aRR:0.88 (0.80, 0.98), Uganda East aRR:0.81 (0.72, 0.92)
  - o Have viral suppression:
    - o Uganda West aRR:0.84 (0.73, 0.96); Uganda East aRR:0.74 (0.58, 0.94)

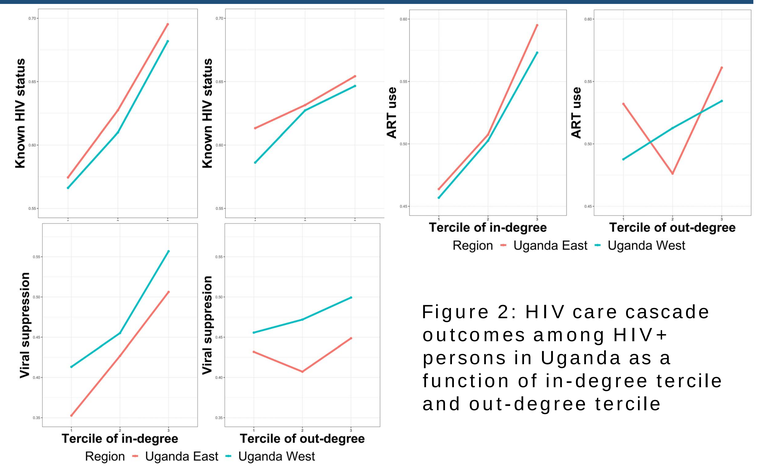

Figure 2: HIV care cascade outcomes among HIV+ persons in Uganda as a function of in-degree tercile and out-degree tercile

	Uganda East (N=1440)	Uganda West (N=2473)
Male	502 (34.9%)	865 (35.0%)
Median (IQR) Age	39 (29, 46)	35 (28, 44)
Marital Status		
Single	108 (7.5%)	258 (10.4%)
Married	932 (64.8%)	1489 (60.2%)
Median (IQR) out-degree	10 (5, 17)	15 (10, 22)
Median (IQR) in-degree	2 (0, 3)	2 (1, 5)
Prior diagnosis	909 (63.1%)	1533 (62.0%)
Prior ART therapy	751 (52.2%)	1265 (51.2%)
Virally Suppressed	517 (35.9%)	967 (39.1%)

Table 1: Selected characteristics of HIV-infected adult residents

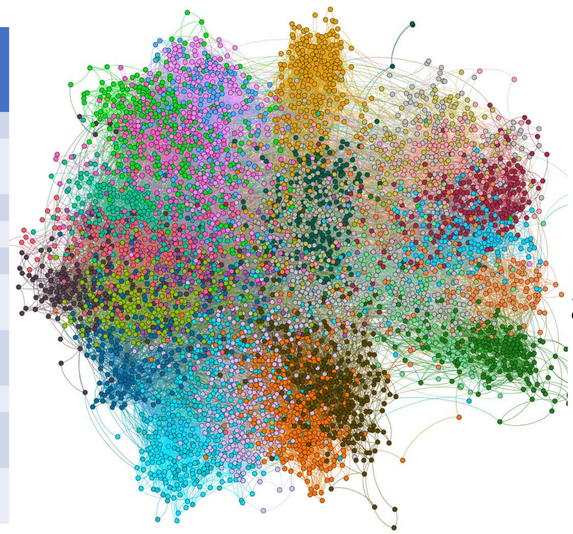

Figure 1: Sample visualization of constructed network in Mitooma (Uganda West), colored by village

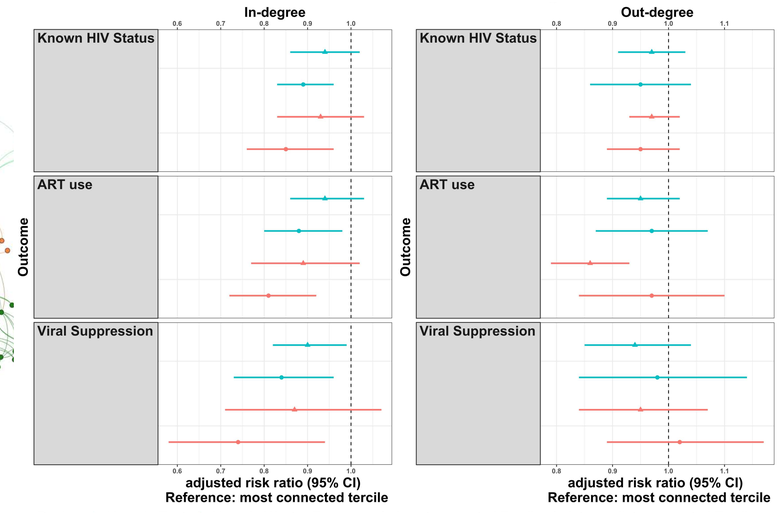

Figure 3: Estimated relative risk of being less connected among HIV+ persons in Uganda

CONCLUSIONS

- HIV+ persons with fewer people naming them as contacts were less likely to know their HIV status, have initiated ART, or have a suppressed viral load.
- Interventions **targeting HIV+ persons with fewer social connections** may contribute to improved clinical outcomes.

ADDITIONAL INFORMATION

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