

Temporal trends in HAART optimism and risky sexual behaviour among HIV-positive and HIV-negative men who have sex with men (MSM) in Vancouver

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Background

- Previous analyses have shown that HAART optimism may reduce the likelihood of safer sexual practices among MSM in North America..
- We studied trends in HAART optimism, and risky sex over a three year period within a cohort of MSM in Vancouver.

Methods

- We enrolled sexually active MSM aged ≥ 16 years into a longitudinal cohort study from February 2012 to February 2015, known as the **Momentum Health Study**
- Follow-up continued until August 2015.
- We collected demographic and sexual risk behaviour information using a self-administered computer-based survey. The survey included the HAART Optimism Scale (HAS), a validated instrument for measuring attitudes towards HIV and antiretroviral therapy.
- We compared trends in HAS scores, the proportions of participants reporting condomless anal intercourse with a serodiscordant or unknown serostatus partner in the previous six months (risky sex) and the proportions agreeing with the statement “a person with an undetectable viral load (VL) cannot pass on the virus” in each six-month period.
- We used mixed effects modelling to examine associations between risky sex with HAS score or responses to this statement forced into the models.
- All analyses were stratified based on self-reported HIV serostatus.

Results

- We enrolled 774 participants of whom 556 self-reported as HIV negative/unknown and 218 as HIV positive.
- The median age was 34 years and 585 (75.6%) identified as Caucasian.
- Trends regarding risky sex, HAS scores and agreement with the statement are found in **Table 1**.
- In HIV negative/unknown men, we found **increasing trends in HAS scores and agreement with the VL/transmission statement** ($p < 0.001$ for both), but **stable proportions of men reporting risky sex** ($p = 0.104$).
- In HIV positive men we found **increasing trends in HAS scores** ($p < 0.001$) **and no trends in agreement with the statement** ($p = 0.111$) **or risky sex** ($p = 0.656$).
- In multivariate models, **HAS was associated with risky sex for HIV negative MSM** (adjusted OR= 1.03; 95%CI 1.00-1.06) **but agreement that people with undetectable VL cannot transmit HIV was not** (aOR=0.95; 95% CI 0.72-1.26).
- For **HIV positive MSM the same pattern emerged**; aOR=1.08 for HAS score (95% CI 1.03-1.12) and aOR=1.25 for agreement with the statement (95% CI 0.86-1.83)

Table 1.

Trends in HAART Optimism Scores, agreement on the preventive value of ART and risky sex over 3 years in Momentum participants

HIV negative/unknown participants							
Time Period	Jul – Dec 2012	Jan-Jun 2013	Jul-Dec 2013	Jan-Jun 2014	Jul-Dec 2014	Jan-Jun 2015	P value for trend
HAART Optimism Scores (Median)	24	24	25	25	26	26	<0.001
Agree “undetectable VL cannot transmit” (%)	20%	22%	26%	30%	34%	36%	<0.001
Risky Sex (%)	30%	32%	33%	29%	33%	27%	0.104
HIV positive participants							
HAART Optimism Scores (Median)	28	30	28	29	31	31	<0.001
Agree that “undetectable VL cannot transmit” (%)	46%	50%	44%	47%	50%	55%	0.111
Risky Sex (%)	29%	43%	40%	42%	46%	41%	0.656

Conclusions

- We observed increasing agreement regarding the preventive value of ART among HIV negative/unknown participants, and increases HAART Optimism Scores for all study participants over a three year period.
- However, **these trends did not correspond to increases in risky sex in either HIV negative/unknown or positive men**, which was generally higher among HIV positive men.
- Agreement on the preventive value of ART was still relatively low (36%) among HIV negative participants even in the last time-period

Conflict of Interest Disclosure:
“I have no conflicts of interest”