

Evaluating Conditional Cash Transfers to prevent HIV and other sexually transmitted infections (STIs) in Tanzania

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Abstract

This study evaluates a randomized intervention that uses economic incentives to reduce risky sexual behavior among young people aged 18-30 and their spouses in rural Tanzania. The goal is to prevent HIV, other sexually-transmitted infections (STIs), and unintended pregnancy by linking cash rewards to negative STI test results assessed every 4 months. The study tests the hypothesis that a system of rapid feedback and positive reinforcement using cash as a primary incentive to reduce risky sexual behavior, coupled with individual and group counseling, can be used to promote safer sexual activity among young people who are at high risk of HIV infection. This paper reports initial results of the randomized controlled trial, finding that enrollees offered \$20 incentives experienced 25% lower STI prevalence than the control arm enrollees after one year.

Introduction

With existing HIV prevention efforts showing limited effectiveness in most African settings, novel approaches are needed. Conditional cash transfers (CCT) have been promising in other domains such as education. This randomized controlled trial assessed whether CCTs could be adapted to help slow the HIV/AIDS epidemic. The study tests the hypothesis that a system of rapid feedback and positive reinforcement using cash as a primary incentive, coupled with group counseling and relationship-skills training, can be used to reduce risky sexual activity among young people who are at high risk of HIV infection.

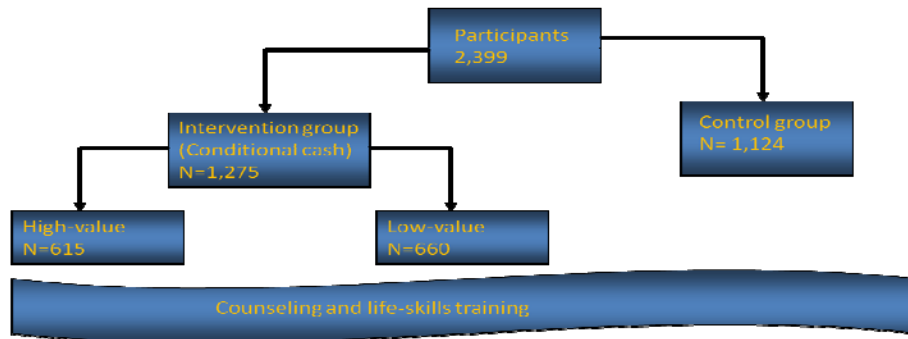
Data and methods

The economic component of the intervention involves the use of CCTs to prevent HIV, other sexually-transmitted infections (STIs), and unintended pregnancy by linking cash payments to negative laboratory test results for a set of curable STIs (*Chlamydia trachomatis*, *Neisseria gonorrhea*, *Trichomonas vaginalis*, *Mycoplasma genitalium*), assessed every four months. The group counseling component addressed gender/power inequities to encourage deliberate decision-making in sexual and reproductive health.

This two-year study involves a randomized controlled trial with two main arms: a treatment arm which received the economic intervention (CCT) for one year starting at baseline, and a control arm which did not. Both arms received STI testing, counseling, and treatment at baseline, month 4, month 8, month 12, and will receive them again at month 24. All participants were offered the group counseling through a series of 12 monthly sessions throughout the first year. The treatment arm further allows sub-study of

the effect of varying sizes of CCTs: 10,000 Tz Shillings (~= 10 USD) or 20,000 TZS every four months. The 2,399 study participants were randomly selected from the Kilombero/Ulangu Health and Demographic Surveillance System in Tanzania.

Figure 1: STUDY DESIGN



Results

Summary statistics at baseline, by arm: The study arms are balanced by baseline STIs. Both CCT arms are slightly older with lower socio-economic status than the control group. The low cash CCT arm is also less likely to be married.

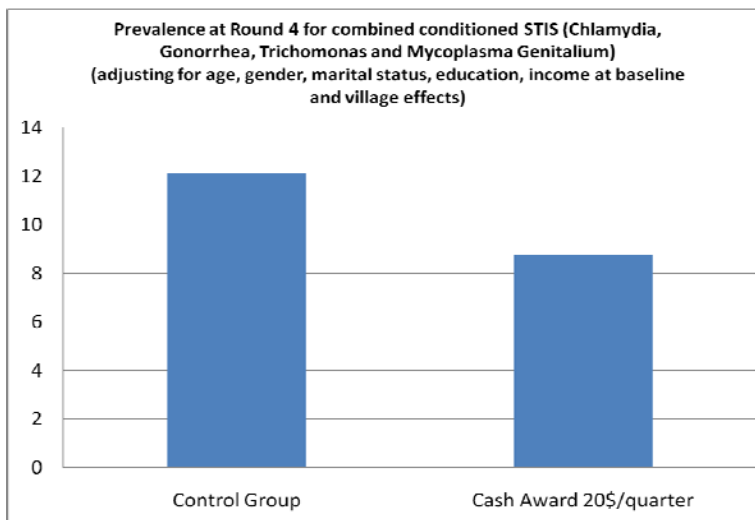
Variables	Control	Low Cash	High Cash
Female	0.50	0.50	0.51
Age	27.15	27.55	27.62
Education			
None	0.12	0.12	0.11
Primary	0.77	0.78	0.78
Secondary	0.11	0.10	0.10
Married	0.75	0.72	0.77
Low SES	0.52	0.57	0.56
Chlamydia	0.02	0.02	0.02
Gonorrhea	0.01	0.01	0.01
Trichomonas	0.12	0.12	0.14
HSV2	0.34	0.34	0.37
Syphilis	0.02	0.02	0.01
HIV	0.04	0.04	0.03

Impact on combined STI prevalence after one year: The following table reports linear regressions where the dependent variable is 1 if the individual had any of the 4 curable STIs tested each 4 months: Chlamydia, gonorrhea, trichomonas, and mycoplasma genitalium. Results below report cash arm marginal effects compared to the omitted

control arm, adjusted for age, gender, marital status, education, income and STIs at baseline and subvillage effects. Standard errors are clustered at the subvillage level.

N = 2194	Coefficient and std. err.	P- value
High value CCT arm (20\$/4 months)	- 0.0344 [0.0168]	0.046
Low value CCT arm (10\$/4 months)	0.0052 [0.0171]	0.762

Results indicate that cash incentives significantly reduced STI prevalence at the 12-month follow-up among study participants. Effects are primarily in the “high value” cash group, not the lower value group, and are concentrated among lower SES enrollees, indicating that the level of the cash relative to SES is important. The magnitude of the effect is large: STIs in the high value cash group were reduced by 25% compared to the control group. Affected STIs are those treatable STIs that were tested at each 4-month interval. Future work will test pathways through which the incentives may be operating: sexual behavior change, vs. treatment behavior change, vs. income.



Conclusions and future possibilities

CCTs are still rare in Africa, and CCTs for STI prevention have never been scaled-up anywhere. This study provides a proof of concept. Further effectiveness studies are needed before considering implementation. Even if shown more broadly effective, there would be many challenges to scaling up the specific design tested here: it is expensive, logistically difficult, and requires high prevalence setting. The use of CCTs for STI

prevention may be most promising in specific high risk populations, when combined with lottery-based approaches, and/or in employer-based health programs. The 24-month follow-up, one-year after termination of the intervention, will provide future evidence regarding longer-term effects of the intervention.

Acknowledgments

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