

# Evaluating Conditional Cash Transfers to prevent HIV and other STIs in Tanzania

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# Rewarding STI Prevention and Control in Tanzania (RESPECT Project)



Implementing institutions

Ifakara Health Institute

World Bank Development Economics Research Group

UC-Berkeley

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# PREMISE



- Treatment: Important, but not the solution to slow the HIV/AIDS epidemic. Estimation that \$1 in prevention averted \$43 in treatment in Thailand (Over et al. 2007)
- Vaccine technology: Many years in future.
- Existing prevention efforts: Low effectiveness in most African settings.
- Novel approaches needed! Conditional cash transfers (CCT) have been promising in other domains ... could they be adapted to help slow the AIDS epidemic?

# OVERVIEW



- What: “Proof of concept” evaluation of randomized CCT to incentivize reduction in risky sex.
- Why: Goal is to decrease HIV incidence, with potential subsequent long-run health and economic benefits.
- How: Condition cash incentives on periodic negative STI tests.
- Where: Ifakara Demographic Surveillance Site in rural Tanzania.

# BEHAVIORAL CHANGE INTERVENTIONS

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- Mass information, education, and communication (IEC) campaigns: shown to have had relatively little impact on patterns of HIV transmission.
- Research finds VCT, condom distribution, circumcision, can be cost-effective... but by themselves may not change trajectory of the epidemic.
- In Tanzanian youth:
  - Awareness of HIV prevention methods is high, but use of those methods is low.
  - Condoms are cheap, but low use
  - Recent VCT campaign had low take-up

# CONDITIONAL CASH TRANSFERS (CCT)

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- Progres/Oportunidades:
  - Condition on education, health behaviors. Increased health visits, vaccinations, general health, height.
- Contingency management: Incentivize reductions in risky behaviors.
  - Substance abuse, e.g. cocaine, alcohol, tobacco
  - Weight loss
  - Seatbelt use
- Several experiments in Malawi: incentives for VCT, HIV incentive trials, regular CCT with monitoring of STI outcomes. (Thornton ; Thornton and Kohler ; Baird, McIntosh, Ozler)

# CCTs to Reduce Risky Sexual Behavior?



- **Conditionality:** Increase “price” of risky sex, if positive STI test causes loss of CCT.
- **Time discounting:** Bring rewards of risk reduction closer to present, rather than just avoiding AIDS many years in future.
- **Income effects:** Direct impact on sexual behavior likely small, but can facilitate behavioral change, especially for women.

# Critical questions



- Because this is a novel approach, there are many unanswered questions on how an intervention using such an approach could be – or should be – designed.
  - What is the appropriate target population? Set within residential communities or riskiest networks?
  - What is the appropriate amount of cash to dispense?
  - What interval of testing/payment is needed?
  - For how long should the intervention run?
  - How can women be assisted in bargaining ability?
  - What are the risks?



# AIM OF THE PROJECT

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- The study will test the hypothesis that using cash as a primary incentive to reduce risky sexual behavior, coupled with counseling and life-skills training, will result in
  - Enhanced economic well-being
  - Improved sexual/reproductive health outcomes.

# SPECIFIC OBJECTIVES

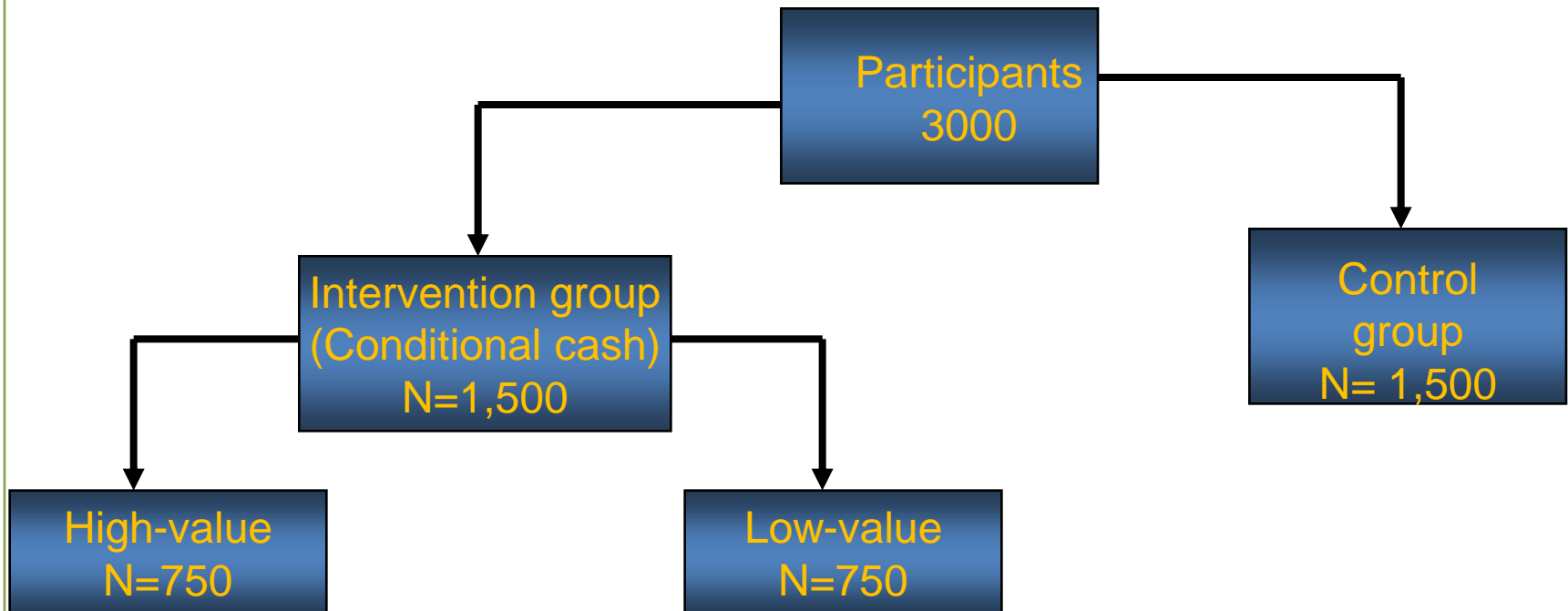


- Evaluate the impact of the combined CCT/counseling intervention during the intervention period (immediate and short-term effects) on STI incidence overall and by specific subgroups
- Evaluate the economic outcomes of the reward.
- Examine the long-term effects of the intervention – and its withdrawal – with final round of STI testing and surveying in the same population 12-months after the intervention has ended
- Compare the impact of the CCT intervention in the high-value cash transfer arm to that in the low-value cash transfer arm

# STUDY DESIGN

The study is a Randomised control trial

Sample drawn from the DSS database



Counseling and life-skills training

# CONDITIONAL CASH TRANSFER (INTERVENTION 1)

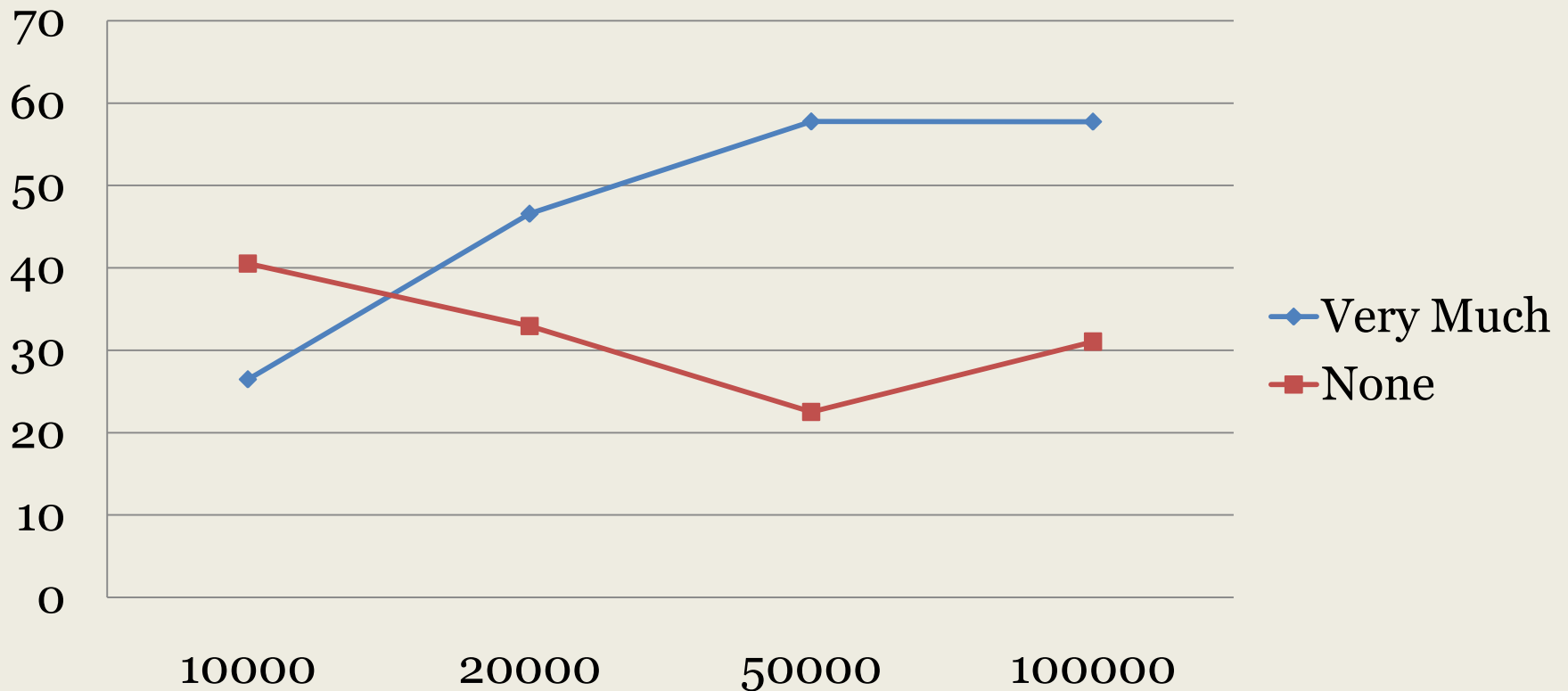
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- **Conditionality: Treatment group**
  - Testing negative for a set of curable STIs (Chlamydia, gonorrhoea, trichomonas, mycoplasma genitalium, syphilis)
  - Although we are testing for them, we do not condition on HIV and HSV-2 because they are not curable.
- **Amount**
  - 20,000 TZ Shillings or  $\approx$  USD 20 every four months (high-value)
  - 10,000 TZ Shillings or  $\approx$  USD 10 every four months (low-value)

# Hypothetical rewards, how much would you change your sexual behavior if you were eligible for it?

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**How much would this eligibility for the reward motivate you to change your behavior?**



# PSYCHO-SOCIAL COMPONENT (INTERVENTION 2)

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- **Content**
  - The psycho-social component
    - ✦ Emphasizes gender-based counseling and “life-skills” training to increase basic financial literacy
    - ✦ Address gender/power inequities
    - ✦ Encourage deliberate decision-making in sexual and reproductive health (prevention of HIV, other STIs, and unintended pregnancy).
- **Frequency and type**
  - Once monthly, during the first year (2 hrs each session); Gender-specific groups

# WHAT IS OFFERED TO THE PARTICIPANTS?

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## Intervention group

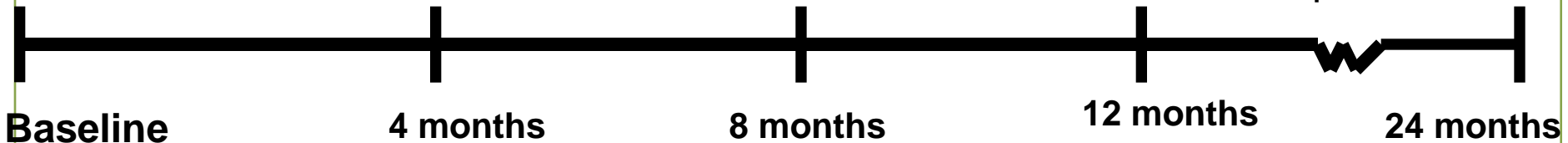
- Pre and post-counseling
- Group psycho-social counseling
- Life-skills training
- STI testing
- Inconvenience fee
- Treatment for STIs
- **Conditional cash**

## Control group

- Pre and post-counseling
- Group psycho-social counseling
- Life-skills training
- STI testing
- Inconvenience fee
- Treatment for STIs

# Chronology and study activities

Registration  
Interviews  
Counseling\*  
Sample collection  
Compensation



- Registration
- Assignment
- Interviews
- Counseling\*
- Sample collection
- Compensation

Registration  
Interviews  
Counseling\*  
Sample collection  
Conditional cash  
Compensation

Registration  
Interviews  
Counseling\*  
Sample collection  
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Registration  
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Conditional cash  
Compensation

\* Pre and post-counseling

The post-intervention follow-up, 12-months later (month 24) will assess long-term biological impact

Treatment, Psychosocial counseling and life-skill straining



# EXPECTED OUTCOMES



- ***Biological outcomes (proxies for risky sexual behavior)***
  - ✦ Total burden of infection
  - ✦ “interval-specific” incidence rates across arms
  - ✦ Impact of the treatment arm, e.g, on self-reported behaviors (e.g. condom use, number and concurrency of sexual partners, etc.).
- ***Economic changes***
- ***Gender-based Power relations***

# Inclusion/Exclusion Criteria



- Inclusion criteria consist of sexually active males and females, aged 18-30 (and spouses ages 16 or over) who reside in selected villages within the Kilombero/Ulanga district HDSS and who consent to participate in the study.
- Exclusion criteria includes:
  - currently pregnant,
    - ✦ intention to permanently migrate out of the DSS area within the next year, and
    - ✦ unwillingness to participate if assigned to the control arm.

# Preliminary results from baseline survey (February –April 2009)

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- We recruited 2419 individuals, 1198 males and 1221 females.
- Team A stayed for one week in each village to recruit, interview and collect specimens.
- Two weeks later, team B visits the village and delivers the results from the tests. 92.2% of the individual tested came back to receive their results. STI positive individuals received free treatment vouchers.
- Monthly counseling sessions started in the 10 villages
- First follow-up and second follow-up surveys completed and round 4 planned (February –April 2010)

# Results from baseline survey

## Marital status and sexual behavior

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Marital status	Males	Females
Single	28.16%	13.91%
Married	57.34%	66.82%
Living in union	11.13%	12.07%
Divorced	3.37%	4.86%
Widowed	-	0.34%
Number of partners in last 4 months		
0	12.18%	10.44%
1	68.05%	86.16%
2	15.62%	2.72%
More than 2	4.15%	0.68%
Condom use during last sexual intercourse		
With spouse or union	15.06%	13.79%
With other partner	61.30%	49.51%

# Baseline survey: Knowledge of HIV and prevention methods. High levels at baseline

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HIV	Males ( N = 1175)	Females (N =1191)
Heard of AIDS or HIV?	99.83% (N = 1,177)	99.92% (N = 1,192)
Can die from AIDS	94.30%	92.53%
<b>Knowledge of prevention methods (ABC): AIDS can be prevented by:</b>		
Just one partner	97.02%	97.40%
Regular condom use	85.62%	84.21%
Abstaining	91.32%	90.93%
Witchcraft	1.96%	4.11%
<b>Other facts about HIV</b>		
Healthy looking person can be HIV infected	97.19%	95.63%
Not being infected after having sex with HIV positive	50.21%	42.74%
Child can be infected during pregnancy	81.62%	88.92%

# Baseline survey: Perceptions about condoms and AIDS treatment

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	Males ( N = 1175)	Females (N =1191)
<b>How effective are condoms in reducing the chance of getting AIDS?</b>		
Almost never effective	13.45%	8.90%
Sometimes effective	15.32%	15.20%
Usually effective	19.06%	18.05%
Almost always effective	44.26%	42.91%
Don't Know (DK)	7.91%	14.95%
<b>Facts and knowledge about AIDS treatment: AIDS treatment</b>		
Is available in area	28.34% DK: 14.13%	38.37% DK: 11.75%
Causes person to live longer	86.13% DK: 4.43%	83.29% DK: 3.53%
Causes person to feel better	83.23% DK: 6.30%	79.51% DK: 6.13%
Eliminates the patient's infectiousness	5.96% DK: 3.40%	5.25% DK: 2.85%
Cures the person	2.04% DK: 2.64%	2.77% DK: 2.10%

# Baseline survey: Testing for HIV before the study and perception of HIV and STI prevalence

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Ever tested for HIV?	Males ( N = 1175)	Females (N =1191)
	34.81%	71.87%
If yes, when last test?	Males ( N = 409)	Females (N =856)
< 12 months ago	45.72%	44.98%
12-23 months ago	27.38%	28.62%
>= 2 years ago	26.89%	26.40%
Received the HIV test results?	90.95%	92.29%
Perceived HIV prevalence, HIV own's risk and history of STIs.		
Perceived HIV prevalence for same age group in community	16.01% (N =1166)	18.40% (N = 1175)
On scale 0-10 what is your risk of being HIV positive	2.12 (N = 1175)	2.19 (N = 1191)
Had sexual infection in last 12 months?	3.48% (N = 1175)	2.27% (N = 1192)

# Preliminary results from baseline survey

## STI prevalence

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- **Conditioned STIs:**
- Chlamydia : Males : 1.69% - Females: 2.69%
- Gonorrhoea : Males : 0.42% - Females: 1.43%
- Trichomonas : Males : 8.61% - Females: 16.40%
- Mycoplasma genitalium: Males : 15.53% - Females: 22.05%
- Syphilis: Males : 2.11% - Females: 1.26%
  
- **Not conditioned STIs:**
- HIV: Males : 2.45% - Females: 4.63%
- HSV-2 : Males : 26.10% - Females: 43.31%



# Some preliminary results beyond the baseline

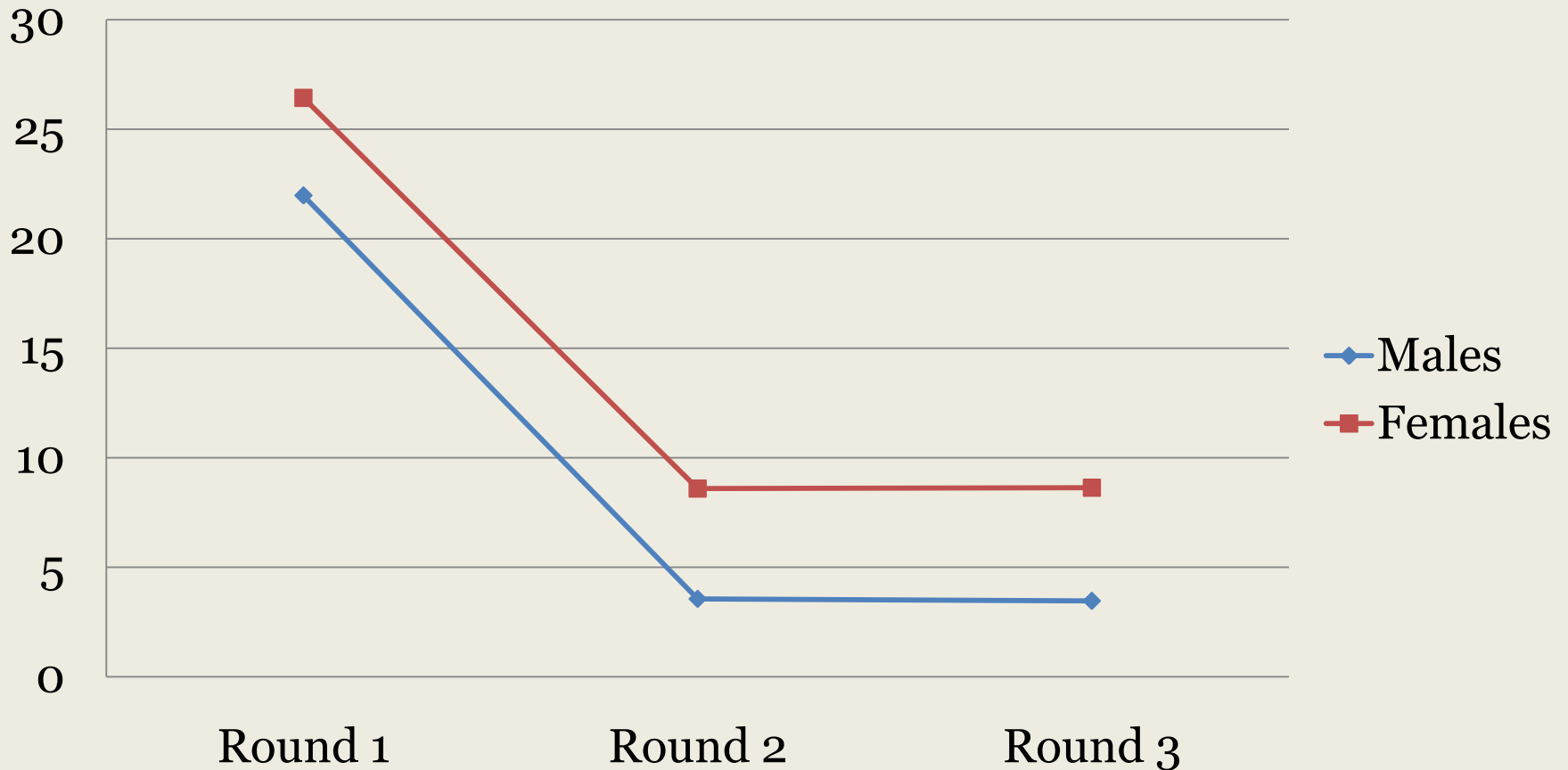
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- Since we are powered to detect changes after 12 months, the study team has decided not to release intermediary results by study arm from rounds 2 (June – August 2009) and 3 (October – December 2009).
- However, we present a few general evolutions on condom perception and decision about sexual activity and condom use among partners. Those are self-reported variables.

# Is it embarrassing to buy condoms?

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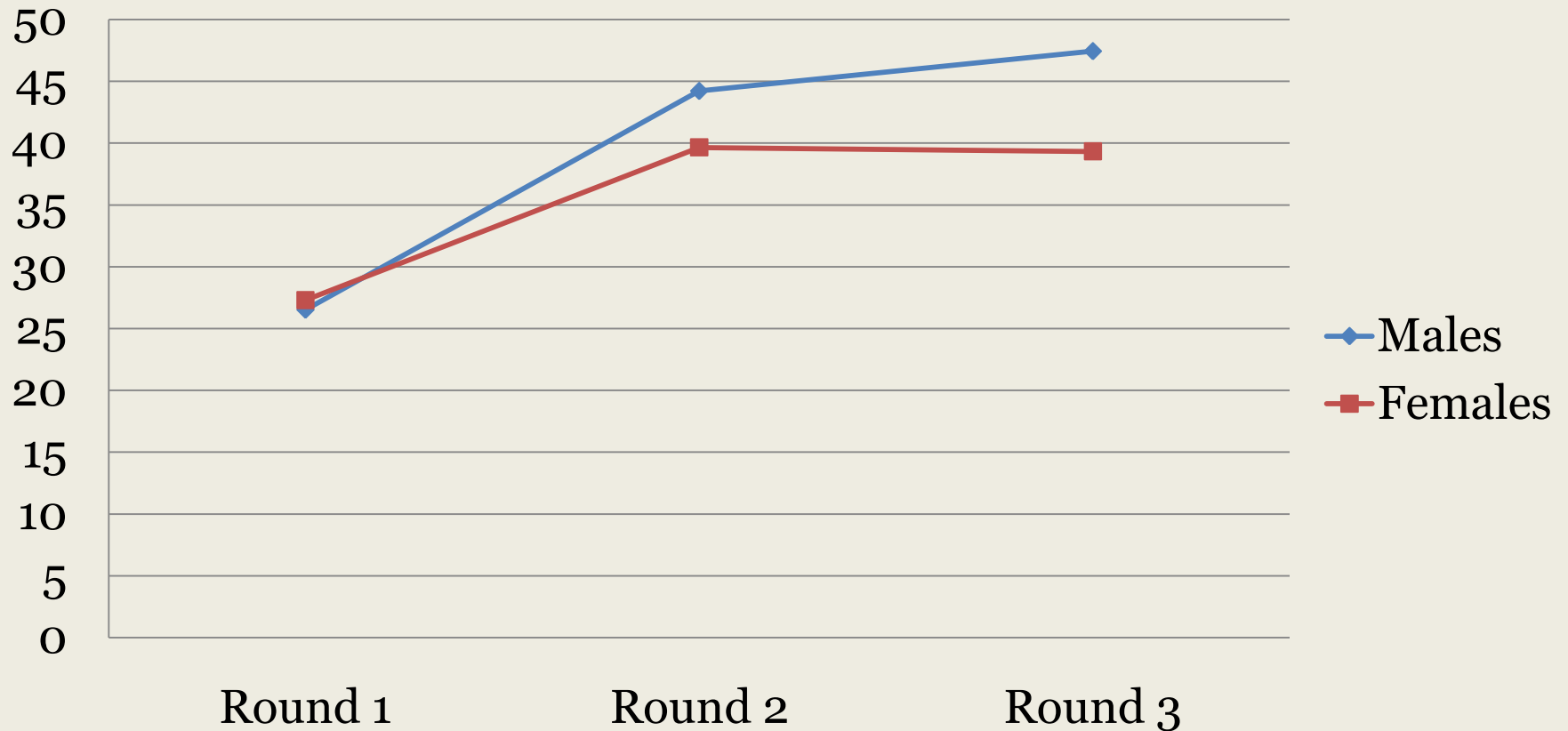
## It is embarrassing to buy condoms



# Decision among partners about having sex

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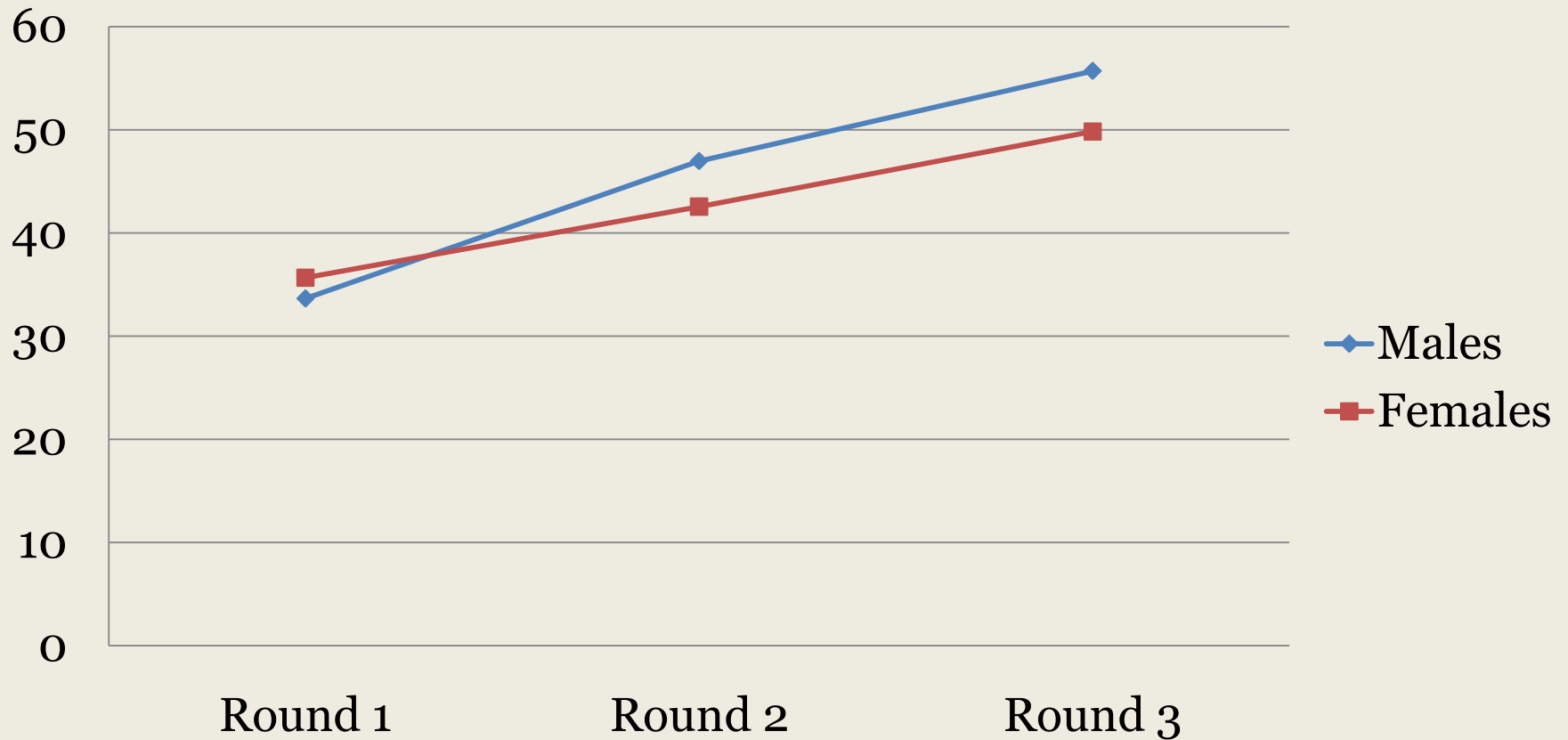
## Both partners decide jointly about having sex



# Decision among partners about using a condom

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## Both partners decide jointly about using a condom



# ETHICS CONSIDERATIONS-INSTITUTIONAL LEVEL



- Ethical clearance by
  - Ifakara Health Institute (IHI) Institutional Review Board
  - National Institute of Medical Research (NIMR)—Ministry of Health and Social Welfare, Tanzania
  - The University of California, Berkeley

# ETHICS CONSIDERATIONS-COMMUNITY LEVEL



## ***Community Sensitization to enhance transparency***

- In each study village, study staff worked with village leaders to build understanding of and support for the study within the villages.
- Study staff gave presentations at community meetings to explain the study and encouraged questions from all concerned community members.
- Study staff also worked together with the community performing groups to provide education on the importance of STI prevention.

# ETHICAL CONSIDERATIONS-INDIVIDUAL LEVEL



- Minors are excluded – minimum age is 18 years
- Comprehensive informed consent
- Free treatment is offered to those who test positive and given another chance to participate
- Partner treatment encouraged via extra vouchers
- HIV/AIDS positive participants will not be excluded nor dropped out of the study.
- We only condition the CCT on curable STIs

# ETHICAL CONSIDERATIONS-INDIVIDUAL LEVEL (2)



- Counseling and life-skills training is offered to all
- Inconvenience fee to all participants (USD 2 per visit)
- The proposed set of STI tests to be performed have been selected to ensure that only minimally invasive procedures are needed for specimen
- Barcodes are used to protect the confidentiality of study participants.



# Future Possibilities?



- CCT is still rare in Africa, but proof of concept can be powerful, if successful.
- Many challenges to scaling up this design. Expensive, logistically difficult, and requires high prevalence setting. May be most promising in specific populations:
  - High risk groups, e.g. MSM, sex-workers.
  - Employer-based health programs.
- Scale-up could be easier if use random testing with large lottery-type payoffs.



*Thank you*