

**Authors**

Ramanhani Abdul  
Ifakara Health Institute

Faraji Abilahi

Mathew Alexander Mwanyangala

Damien De Walque  
World Bank

William Dow  
University of California, Berkeley

Erick Gong  
Middlebury College

Zachary Isdahl  
Deputy Regional Director, East Africa & Country Director, Tanzania

Julian Jamison  
University of Exeter

Boniphace Jullu

Albert Majura

Carol Medlin  
Children's Investment Fund Foundation (CIFF)

Edward Miguel  
University of California, Berkeley  
Center for Effective Global Action (CEGA)

Jeanne Moncada

Sally Mtenga

Rose Nathan

Laura Packel  
University of California, Berkeley

Julius Schachter

Kizito Shirima

Suneeta Krishnan

# Incentivising safe sex: a randomised trial of conditional cash transfers for HIV and sexually transmitted infection prevention in rural Tanzania

Damien de Waeghe,<sup>1</sup> William H Dow,<sup>2</sup> Rose Nathan,<sup>3</sup> Ramadhani Abdul,<sup>4</sup> Faraji Abilahe,<sup>5</sup> Erick Gong,<sup>6</sup> Zachary Isdah,<sup>6</sup> Julian Jamison,<sup>7</sup> Boniphace Julius,<sup>8</sup> Sureeta Krishnan,<sup>9</sup> Albert Majura,<sup>6</sup> Edward Miguel,<sup>6</sup> Jeanne Moncada,<sup>9</sup> Sally Mtenge,<sup>2</sup> Mathew Alexander Mwanangale,<sup>4</sup> Laura Packer,<sup>10</sup> Julius Schachter,<sup>9</sup> Kizito Shirima,<sup>3</sup> Carol A Medlin<sup>11</sup>

To cite this Volume 2: Dow WH, Nathan R, et al. Incentivising safe sex: a randomised trial of conditional cash transfers for HIV and sexually transmitted infection prevention in rural Tanzania. *BMJ Open* 2012;2:e002107. doi:10.1136/bmjopen-2011-002107

• Population history and additional materials for this paper are available online. To view these files please visit the journal online (<http://bmjopen.bmj.com>).

Received 9 December 2011  
Accepted 10 December 2011

This trial article is available for use under the terms of the Creative Commons Attribution Non-Commercial 2.0 license. See <http://bmjopen.bmj.com>

For numbered affiliations see end of article.

Correspondence to: Dr Damien de Waeghe; [ddewaeghe@bwh.harvard.edu](mailto:ddewaeghe@bwh.harvard.edu)

de Waeghe D, Dow WH, Nathan R, et al. *BMJ Open* 2012;2:e002107. doi:10.1136/bmjopen-2011-002107

## ABSTRACT

**Objective:** The authors evaluated the use of conditional cash transfers as an HIV and sexually transmitted infection prevention strategy to incentivise safe sex.

**Design:** An unblinded, individually randomised and controlled trial.

**Setting:** 10 villages within the Kilombero/Ulanga districts of the Ifakara Health and Demographic Surveillance System in rural south-west Tanzania.

**Participants:** The authors enrolled 2399 participants, aged 18–30 years, including adult spouses.

**Interventions:** Participants were randomly assigned to either a control arm ( $n=1124$ ) or one of two intervention arms: low-value conditional cash transfer (eligible for \$10 per testing round,  $n=480$ ) and high-value conditional cash transfer (eligible for \$20 per testing round,  $n=615$ ). The authors tested participants every 4 months over a 12-month period for the presence of common sexually transmitted infections.

In the intervention arms, conditional cash transfer payments were tied to negative sexually transmitted infection test results. Anyone testing positive for a sexually transmitted infection was offered free treatment, and all received counselling.

**Main outcome measures:** The primary study end point was combined prevalence of the four sexually transmitted infections, which were tested and reported to subjects every 4 months: *Chlamydia trachomatis*, *Neisseria gonorrhoeae*, *Trichomonas vaginalis* and *Mycoplasma genitalium*. The authors also tested for HIV, herpes simplex virus 2 and syphilis at baseline and month 12.

**Results:** At the end of the 12-month period, for the combined prevalence of any of the four sexually transmitted infections, which were tested and reported every 4 months (*C. trachomatis*, *N. gonorrhoeae*, *T. vaginalis* and *M. genitalium*), unadjusted RR for the high-value conditional cash transfer arm compared to controls was 0.80 (95% CI 0.58 to 1.06) and the adjusted RR was 0.73 (95% CI 0.47 to 0.98). Unadjusted RR for the low-value conditional cash

## ARTICLE SUMMARY

### Article focus

- Existing prevention strategies have had a limited impact on the trajectory of the HIV/AIDS epidemic.
- Conditional cash transfers have been used successfully in a variety of settings to promote activities that are beneficial to the participants, such as school participation or health check-ups for children.
- This trial asks whether conditional cash transfers can be used to prevent people from engaging in activities that are harmful to themselves and others, such as unsafe sex.

### Key messages

- We designed and evaluated a novel intervention that tests for risky sexual behaviour regularly over short time intervals, reinforcing learning about safer behaviour with cash transfer incentives conditional on testing negative for a set of curable sexually transmitted infections (STIs).
- After 12 months, the results from the adjusted model showed a significant reduction in the combined point prevalence of the four curable STIs tested every 4 months by nucleic acid amplification tests in the group that was eligible for the \$20 payments, but no such reduction was found for the group receiving the \$10 payments.
- The results suggest that conditional cash transfers used to incentivise safer sexual practices are a potentially promising new tool in HIV and STI prevention. Additional larger study would be needed to clarify the effect size, to estimate the size of the incentive and to determine whether the intervention can be delivered cost effectively.

transfer arm compared to the low-value conditional cash transfer arm was 0.76 (95% CI 0.49 to 1.02) and the adjusted RR was 0.68 (95% CI 0.43 to 0.92). No harm was reported.

# Incentivising safe sex: a randomised trial of conditional cash transfers for HIV and sexually transmitted infection prevention in rural Tanzania

The authors evaluated the use of conditional cash transfers as an HIV and sexually transmitted infection prevention strategy to incentivise safe sex. An unblinded, individually randomised and controlled trial of 10 villages within the Kilombero/Ulanga districts of the Ifakara Health and Demographic Surveillance System in rural south-west Tanzania. The authors enrolled 2399 participants, aged 18–30 years, including adult spouses. The primary study end point was combined prevalence of the four sexually transmitted infections, which were tested and reported to subjects every 4 months: *Chlamydia trachomatis*, *Neisseria gonorrhoeae*, *Trichomonas vaginalis* and *Mycoplasma genitalium*. The authors also tested for HIV, herpes simplex virus 2 and syphilis at baseline and month 12. Conditional cash transfers used to incentivise safer sexual practices are a potentially promising new tool in HIV and

sexually transmitted infections prevention. Additional larger study would be useful to clarify the effect size, to calibrate the size of the incentive and to determine whether the intervention can be delivered cost effectively.

February 01, 2012