The Economic, Health, and Psychological Effects of Health Insurance and Unconditional Cash Transfers in Kenya

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Sector(s): Finance, Health, Social Protection

Location: Nairobi

Sample: 789 informal workers

Target group: Adults Families and households Informal workers

Outcome of interest: Asset ownership Health outcomes Job mobility Mental health Productivity Take-up of program/social service/healthy behavior

Intervention type: Cash transfers Insurance Risk mitigation Social protection Unconditional cash transfers

AEA RCT registration number: AEARCTR-0000647

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Notes: This evaluation was started while Johannes Haushofer was a postdoctoral fellow at J-PAL.

Partner organization(s): Cooperative Insurance Company (CIC), Kamukunji Jua Kali Association, Innovations for Poverty Action (IPA), Safaricom, National Institutes of Health (NIH), Cogito Foundation

Unconditional cash transfers (UCTs) and health care insurance are two interventions that are expected to enhance welfare in low- and middle-income countries, but little is known about one relative to the other. To help fill this gap, researchers evaluated the effects of a free health insurance policy and UCTs of the same value on the economic, health, and psychological outcomes of informal workers in Kenya. Participants who received health insurance self-reported reduced stress and had lower cortisol levels; UCTs led to fewer children in the household being sick and reduced overall hospitalizations in the household. Neither intervention had meaningful impacts on economic outcomes or other metrics of health and healthcare utilization.

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Unconditional cash transfers (UCTs) and health insurance are promising interventions to improve welfare outcomes in low- and middle-income countries. Health insurance may improve well-being because it can reduce catastrophic healthcare expenses. This in turn allows individuals to allocate spending to other everyday household priorities, save, and make long-term investments. UCTs are attractive in theory because they are sums of cash given with no conditions, allowing individuals to allocate resources to their most productive use.

However, which of these two interventions provides the greatest benefits is not well understood. Identifying whether one of these policies yields better welfare results may have relevant implications for policy and decision-making. Researchers contributed to

this debate by comparing the effects of free health insurance and UCTs on economic outcomes, health, healthcare utilization, and psychological well-being of informal workers in Kenya.

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This study focused on adult informal sector workers in Nairobi, Kenya. At the time of the study, Kenya's informal sector accounted for over 70 percent of the country's non-farm employment. Workers in the sector include artisans, vendors and mechanics, and are exposed to a range of stressful situations, including vulnerability to illness, economic dislocation, and natural disasters. The neighborhood where the study took place comprised primarily of metalworkers and vendors, who usually worked in hazardous conditions with minimal safety equipment. Given their exposure to all such risks, these workers could especially benefit from economic interventions such as health insurance and UCTs, which help to mitigate uncertainty and financial constraints. The weekly household income of workers in the sample was US$179.70 PPP on average (about US$718.80 PPP per month).



Three men assemble a metal well frame.

Photo credit: marlenefrancia, Shutterstock.com

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To identify the impact of health insurance and UCTs on economic and welfare outcomes, researchers randomly assigned 789 informal workers of the Kamukunji Jua Kali Association (JKA)—an organization of approximately 4,000 informal metalworkers—into one of three groups:

1. *Comparison group:* 282 study participants received no intervention.
2. *Health insurance:* For a one-year period, 259 participants were enrolled for free in the Afya Bora plan, a combined inpatient and outpatient family health insurance policy offered by the Cooperative Insurance Company (CIC). Participants were eligible for inpatient benefits of up to US$6,437 PPP per family, which covered services such as hospital accommodation, routine lab tests, and medications. Households were also eligible for outpatient benefits of up to US$1,287 PPP per family that covered routine outpatient consultations, medication, and more. The plan provided benefits to principals and spouses under 72 years of age, and children dependents younger than 25 years with proof of enrollment in school or college.
3. *Unconditional cash transfer:* 248 participants received a UCT equivalent to the annual premium they would have had to pay had they enrolled in the Afya Bora plan, offered by Innovations for Poverty Action. The magnitude of this transfer was US$328 PPP for households with up to five dependents, with an additional US$52 PPP for each dependent beyond the first five. The transfer was delivered to recipients electronically using M-Pesa, a mobile money system offered by Safaricom, the largest Kenyan mobile phone operator.

Participants were surveyed before they were offered the programs, between March 2011 and December 2011, and at least one year after the first interview, between January 2013 and April 2013. UCTs were disbursed in March 2012, and most participants in the insurance group had their one-year coverage starting between January 2012 and July 2012.

The surveys asked respondents about household characteristics, consumption, asset holdings, workplace, insurance usage, health, self-reported well-being, and time and risk preferences. In addition to questionnaire measures of psychological well-being, researchers obtained saliva samples from all respondents, to measure the levels of the stress hormone cortisol. Researchers compared these outcomes across the three groups to assess the programs' effects.

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Participants receiving health insurance had lower levels of self-reported stress and cortisol levels, with no impact for those receiving UCTs. UCTs led to fewer children in the household being sick and reduced overall hospitalizations in the household. Neither intervention had strong effects on economic outcomes or other metrics of health and healthcare utilization.

Low insurance take-up: In line with previous research, health insurance take-up was low, with only 37 percent of those enrolled in the insurance program ever making a claim. The lack of improvement on health outcomes after insurance provision is a possible explanation for low take-up in this context.

Economic outcomes: Health insurance and UCTs had no meaningful impact on most economic outcomes, such as productivity, labor mobility, and job risk.

Health outcomes: Health outcomes also were not generally affected by health insurance. The UCT group, on the other hand, experienced improvements in some health metrics, such as a 9 percentage-point reduction in the proportion of children in the household who were sick in the past month from a base of 23 percent, and an 8 percentage-point reduction in the probability that any household member was hospitalized in the past year from a base of 30 percent; however, other outcomes were unaffected.

Psychological well-being: In the insurance group, self-reported stress decreased by 0.29 standard deviations, as measured by the Perceived Stress Scale[1], and cortisol levels fell by 16 percent relative to the comparison group. There were no such reductions in the cash group. Other measures of psychological well-being besides stress were not affected by either of the interventions.

Mechanisms behind effects on stress: Researchers investigated channels through which insurance, but not the cash equivalent amount, could have reduced self-reported stress and cortisol levels. The most plausible mechanism was a "peace of mind" effect,

which resulted from merely having insurance coverage and was not produced by receiving a cash transfer of equal magnitude. Evidence of other potential channels, such as insurance leading to better economic outcomes or more health care utilization, was ruled out.

Cost-effectiveness analysis: The health insurance program led to a 0.48 nmol/L reduction in cortisol per US$100 spent. This amount is considerably larger than the benefit per dollar achieved by Haushofer and Shapiro's (2016) US$1520 PPP transfer, which also affected cortisol levels, but led to a 0.10 nmol/L reduction per US$100 invested. Overall, health insurance appears to be more cost-effective in decreasing stress—the only outcome that was somewhat affected by the interventions in this study—than UCTs.

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1. A 14-item scale developed to measure the extension to which situations in a person's life are considered unpredictable, uncontrollable and overloading.