

## RWANDA: Will More People be Tested for HIV if Clinics are Paid Extra?

The world has made great strides toward ending AIDS. Yet the deadly disease remains a critical development challenge for poor countries. Sub-Saharan Africa, which has only 12 percent of the global population, is home to about 68 percent of all people living with HIV. Improving rates of



HIV testing in order to identify and counsel infected people is necessary for halting transmission of the virus and ensuring that people who are infected can get treated.

The challenge is how to improve rates of testing, especially among couples where one partner is infected and either doesn't know or hasn't told the partner. Increasingly, pay-for-performance is being considered as an option for improving health care for pregnant women and children. Development experts and policymakers are interested in whether bonus payments can work in other areas of health care, such as improving the rate of HIV testing and treatment, especially in couples.

The World Bank is working with the international community and governments to improve health care, and part of this is halting the spread of HIV and identifying infected people in order to make treatment possible and help reduce transmission. Succeeding requires understanding what programs are working, and how these programs can be adjusted for specific goals. In Rwanda, impact evaluation researchers looked at the results of a national pay-for-performance scheme that included extra payments for clinics that tested individuals and couples for HIV infection. The evaluation found that the payments increased the likelihood that people who were part of a couple would get tested, showing that pay-for-performance could be a route for improving testing (and thus making available information on how to prevent HIV transmission) among those who face risk of infection from their partner. **The results are particularly important for Sub-Saharan Africa, where according to 2009 World Health Organization data, nearly 80 percent of HIV-infected adults are unaware of their HIV status, and more than 90 percent don't know if their partners are infected.**

HEALTH

### Context

The Government of Rwanda has made rebuilding institutions destroyed in the 1994 civil war and genocide a priority. One area of focus has been the health system, especially treatment for women and children. In 2001, the government started piloting programs that gave health facilities bonus payments for meeting certain goals, such as getting

pregnant women in for prenatal care and vaccinating children. The pay-for-performance program was expanded nationwide in 2006, and at the government's request an impact evaluation was built in to measure the impact on key health indicators (Evidence to Policy, March 2013, "Can Bonus Payments Improve the Quality of Health").

The pay-for-performance program included bonus payments linked to testing, treatment and prevention of mother-child transmission. An estimated 3 percent of Rwandan adults were infected with HIV/AIDS, and the government especially wanted to increase testing to help reduce transmission and offer treatment to those who needed it. One particular concern was that HIV in-

fectured people in a relationship either didn't know they were infected or were not always informing their partner, increasing the risk of transmission. In order to test whether bonus payments worked specifically for improving the rate of HIV testing, an impact evaluation focused on HIV testing was included in the broader pay-for-performance scheme.

## Evaluation

The impact evaluation design took advantage of phased-in implementation of the pay-for-performance program at the district level. Districts in which non-governmental organizations were already running their own bonus payment programs for health facilities were excluded. Using 2002 census data, the remaining districts were grouped based on similarities for population density, rainfall, and economic activity.

Health facilities in each group were randomly assigned either to the treatment group or to the comparison group, though researchers were forced to make changes in the original assignment because of a government-led redrawing of administrative districts. Still, the treatment and control groups were comparable at baseline, and researchers used a method called difference-in-difference to compare changes between the treatment and control groups.

Facilities in the treatment group qualified for bonus payments based on how many people got tested for HIV. Facilities in the comparison (control) group received the same average amount of money without any conditions. Giving the comparison group the same average amount of money without linking it to performance results made it possible to isolate the impact of linking payments to performance. This made it possible to test whether any change in HIV testing was due to the bonus payment structure.

In total, nine districts were in the treatment group and seven in the comparison group. Within those districts,

only facilities offering HIV/AIDS services were included in the evaluation, with 10 in the treatment group and 14 in the comparison group. Health clinics in the treatment groups started qualifying for the HIV-testing bonus payments in January 2007 and this continued for 12 to 15 months, with payments made quarterly. The comparison group received payments for about 18 months. Payments to the comparison group were calculated as an average of the payments made to the treatment group.

A baseline survey of facilities was conducted in the second half of 2006, and the follow-up survey took place between April 2008 and July 2008. A separate household level survey sampled 1,000 households with an HIV-positive member, and 600 randomly sampled neighboring households in the area served by the health facilities in the evaluation. HIV-positive individuals were identified through the health facility or a group for people with HIV/AIDS. They had to give informed consent before households were interviewed.

To measure the impact on testing of individuals, people who were HIV positive were excluded from the analysis, leaving 438 individuals in the treatment group and 445 in the comparison. Everyone was 15 years old or older. In order to measure the increase in testing among couples, the researchers focused on the sample of adults identified as HIV negative (these were people who were not identified as HIV positive in the previous sample), who reported having sex in the previous 12 months and who lived with their sexual partners.

This policy note summarizes the results of the World Bank Group's **Policy Research Working Paper 6364, "Using provider performance incentives to increase HIV testing and counseling services in Rwanda,"** by Damien de Walque, Paul J. Gertler, Sergio Bautista-Arredondo, Ada Kwan, Christel Vermeersch, Jean de Dieu Bizimana, Agnès Binagwaho, and Jeanine Condo. February 2013. Available at <http://go.worldbank.org/MDE1NURDQ0>. The study was published in the *Journal of Health Economics*, 40 (2015) 1–9, available through [www.elsevier.com/locate/econbase](http://www.elsevier.com/locate/econbase).

## Results

### **People were more likely to get tested for HIV if they lived in the areas served by health facilities that qualified for bonus payments linked to testing.**

The likelihood that someone had been tested for HIV significantly rose by 6.1 percentage points (or a 10.6 percent increase over baseline) if they went to a facility that could receive bonus payments, compared with someone seen at a facility that received extra money regardless of how many people were tested. Before the program started, the overall testing rate was 53.9 percent.

However, the increase was driven by more testing among individuals who lived with their sexual partners. The testing rate among couples before the program was launched was 69.4 percent. More than a year later, HIV testing rose by 10.2 percentage points compared with people seen at facilities that didn't qualify for bonus payments. In fact, there was little effect on the rate of HIV testing for people who weren't living with their sexual partner.

### **The impact was the strongest among people whose partner had HIV/AIDS.**

In couples where one partner was living with HIV/AIDS, testing of the other partner increased by 14.7 percentage points. Given the importance of knowing someone's HIV status in order to get them into AIDS treatment or to take precautions to reduce transmission among partners, these are important gains.

Among all couples, the likelihood that both partners reported that they had been tested—whether previously or during this period—rose by 8.6 percentage points, an increase of 12.7 percent.

### **The payments were structured to promote testing of couples.**

Clinics received US\$4.59 for each couple tested, but only US\$0.92 for testing an individual. These payments

were part of a broader package of bonus payments linked to HIV testing, counseling and treatment.

### **Health clinics were free to use the bonus payments as they wanted and most of the money went to improving pay for employees.**

Among the clinics that qualified for bonus payments, the money they received was equal to 14 percent of



their overall spending in 2007. On average, about 60 to 80 percent of the bonuses went to increased pay for clinic workers.

### **What the evaluation showed is that just giving clinics more money may not be as effective as linking extra money to specific health activities, like HIV testing.**

By creating a comparison group of health clinics that received similar payments without having to meet any performance conditions, the researchers were able to really look at the link between pay-for-performance and improving the rate of HIV testing. They found that clinics did a better job getting couples tested when their payments were linked to the number of people tested, rather than when they received an additional quarterly payment not linked to performance.

## Conclusion

This evaluation, believed to be the first to examine the impact of pay-for-performance on improving HIV testing and related services, showed that giving providers more money for testing couples worked. The findings contribute to growing evidence that paying health facilities for performance is a workable, effective method for improving health system performance. The results also contribute to the relatively small literature on the effects of paying medical care providers for performance in developing countries.

### In sub-Saharan Africa....

- The number of children newly infected with HIV dropped by 24 percent between 2009 and 2011;
- HIV testing among women is on the rise;
- And an estimated 56 % of people eligible for HIV treatment were receiving it by 2011.

*Source: UNAIDS Regional Fact Sheet for sub-Saharan Africa 2012*

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