

Conditional Cash Transfers for High-Risk Pregnancies

Background: Complementing CCTs for PMTCT

New Incentives helps HIV-positive women give birth to healthy babies by incentivizing them to complete their medical treatment using conditional cash transfers (CCTs). Given the high mortality rate of HIV-positive infants, 1 in 2 die within two years lacking treatment, **CCTs for the prevention of mother-to-child transmission of HIV (PMTCT)** are among the most cost-effective interventions.

Due to the focus on a highly cost-effective approach with a small target group, scaling the CCT for PMTCT by itself is a challenge. According to the latest clinic-level data for Akwa Ibom State, Nigeria, New Incentives can serve 1,500 to 2,000 HIV-positive expecting mothers on an annual basis by operating in 12 clinics that have a minimum volume of poor HIV-positive pregnant women (from 5 to 40 women per month). Expansion to smaller clinics in Akwa Ibom or to other Nigerian states entails administrative costs that would increase the overhead ratio of New Incentives and dilute its mission to provide cash transfers that result in health benefits at a reasonable cost.

New Incentives could address this scaling challenge by complementing its CCT for PMTCT with a moderately to highly cost-effective **CCT for High-Risk Pregnancies** program (CCT for HRP). This would allow the organization to build upon its established network of clinics and cash transfer infrastructure in Akwa Ibom. Implementing two CCT arms for maternal and newborn health would make scaling to new clinics and new states considerably more efficient and impactful.

Impact: CCTs for High-Risk Pregnancies (HRP)

CCTs for high-risk pregnancies encourage expecting mothers irrespective of their HIV status to attend ANC visits and, most importantly, deliver at a public hospital. Furthermore, it will include a Malaria component that consists of distributing a bed net to the pregnant mother as well as tracking Malaria prophylaxis during pregnancy (IPTp).

Similar to CCTs for PMTCT, the new program will address a demand-side problem for a highly cost-effective health program. Thanks to a variety of interventions from bed nets to vaccinations, under-five mortality has been reduced considerably over the past years. However, a large percentage of newborns still die within the first 28 days of their lives (neonatal period). The global health community therefore considers neonatal death the key challenge in reducing newborn mortality ([Lancet 2014](#)). Almost 75% of neonatal deaths occur within the first seven days of delivery and a vast majority of these occur in the first 24 hours ([Salam et al 2014](#)). While the risk in the first hours after birth is especially high, there are simple interventions that have a profound impact on reducing neonatal mortality, including hygienic care of umbilical cord, basic neonatal resuscitation, kangaroo mother care, and early initiation of breastfeeding ([Salam et al 2014](#)). Delivery at facilities meeting basic quality standards ensures that these interventions are applied. However, less than a third of all women registering their pregnancy at a public hospital in Akwa Ibom State, Nigeria, actually deliver at such a facility. Most women deliver at home, at churches, or with traditional birth attendants (TBAs) instead. A CCT that focuses on facility delivery can therefore potentially have a profound impact on newborn mortality.

This impact is confirmed in models by the leading software to calculate the number of children's lives saved by health interventions ([LiST](#)). According to LiST calculations by New Incentives, facility delivery is by far the most cost-effective intervention in the context of Nigeria, even when compared to other highly cost-effective interventions including bed nets and vaccinations.

The LiST calculations are confirmed by a meta-analysis of 19 studies that found facility delivery to reduce the risk of neonatal mortality by 29% ([Tura et al. 2013](#)). However, the results of individual studies are mixed, as facility delivery requires a certain basic standard of health facilities. World Bank economist [Das 2014](#) is especially critical of perceiving facility delivery as a panacea, referring mostly to the case of India where all pregnant women (not a subset) were incentivized to deliver at poorly staffed clinics. As a result, clinics with only two staff members would be responsible for up to 1,000 deliveries per month. New Incentives believes that the quality standard of target clinics in South Nigeria is considerably higher than in rural India, as shown by nurse attendance and availability of medical supplies, amongst other indicators. Moreover, New Incentives will only incentivize around 30% of women, those with high-risk pregnancies, to deliver at the facility. Hence, the increase in deliveries should be manageable.

Research on the impact of CCTs on maternal and newborn mortality is preliminary. [Glassmann et al \(2013\)](#) underline that "it has not been well documented so far". Yet the authors still conclude "CCT may have an impact on ... mortality. However, more studies are required to make a definitive statement." Reasons for a lack of clear evidence of an impact on mortality include poor quality of clinics, the high number of study participants required to measure an effect on mortality, and the tendency to track infant deaths more closely in a study setting (thereby underestimating the effect of the cash transfer).

Overall, New Incentives considers facility delivery a highly promising strategy, if the supply side is taken into consideration. While other health interventions might be easier to incentivize from a supply-side perspective, including easily administrable vaccinations, the potential impact of facility delivery is much higher as baseline rates are lower and the mortality risk during and after birth extremely high.

Here is a summary of the draft cost-effectiveness calculations.

Cost-Effectiveness

- This CCT is expected to save a life for approximately \$5,000 - \$10,000 (see separate Excel file).

Notes: The benefits of facility delivery were calculated for all pregnant women, not the subset of high-risk pregnancies. Hence, cost-effectiveness is likely higher. Moreover, the benefit of the cash transfer in reducing poverty was not factored in.

Further inquiries are being made to determine whether cost-effectiveness calculations for ITNs in LiST take into account that not all pregnant women will properly use the bed net. See *Notes on Cost-Effectiveness Calculations* for more details.

Program Overview

Beneficiaries

The CCT for High-Risk Pregnancy is highly targeted as only approximately 30% of women with high-risk pregnancies and their newborns benefit (based on standard WHO indicators including age of mother, high blood pressure, Malaria, anemia, previous newborn deaths, etc).

The targeted approach has two advantages:

1. Focus on the most vulnerable and preventing the most deaths
2. Takes the supply side into consideration as not 100% of pregnant women are sent to deliver at the hospital, which would overburden the existing infrastructure. By targeting 30% of high-risk women, around 21% (70% of high-risk women), are actually expected to deliver at the hospital. The remaining percentage is not expected to follow-through with the program for a variety of reasons.

Beneficiaries

- Targets high-risk pregnancies based on established criteria (around 30% of all pregnancies, excluding HIV-positive women that are covered by the PMTCT CCT).

HIV-positive women are considered to have high-risk pregnancies too; however, New Incentives will continue to serve them in the separate CCT for PMTCT program.

Targeting

The targeting of the high-risk women will be primarily conducted by clinic nurses, as New Incentives wants to build on the existing health system, not compete with it. New Incentives will ask the nurses to apply a broad definition of high-risk pregnancy that would cover almost 50% of all pregnant women (i.e. up to 40% had C-sections in the past, a key indicator of high-risk, and a significant percentage had their last delivery outside the clinic setting, another indicator of high-risk). On Booking Days, the nurses submit roughly five patient cards of women considered high-risk every hour. New Incentives then randomly selects 30% of the 50% considered high-risk. This randomization ensures that the selection of beneficiaries is not solely in the hands of the nurses and thereby goes a long way in preventing fraud.¹ New Incentive staff members are required to register all five names of high-risk women per randomization batch in a mobile app. Hence, New Incentives HQ can also ensure that its own staff members do not commit fraud by preferring particular women over others and asking them for a bribe.

Overall, the suggested approach offers the benefits of targeting the highest-risk women that face the highest mortality risk but also of applying some form of randomization to prevent fraud. It is therefore considered superior to (a) selecting high-risk women without randomization or (b) randomly selecting 30% of all pregnant women (including low-risk).

¹ As an additional measure to prevent fraud, New Incentives conducts pregnancy retesting of 10% of all shortlisted potential beneficiaries – as currently practiced in the PMTCT program.

Conditions

The key condition of the CCT program is facility delivery. However, a range of other highly effective interventions is incentivized as well.

Conditions

- Incentivizes at least two **ANC visits** to ensure receipt recommended doses of **IPTp** (intermittent preventive malaria treatment in pregnancy)
 - Handout of **ITN** (Insecticide-Treated Bed Nets) at the first ANC visit to protect the mother and subsequently newborn and encourage proper usage at key points before and after delivery.
 - Incentivizes **birth at facility** which covers the most important interventions to prevent neonatal death
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The Insecticide-Treated **Bed Nets** will be handed out by New Incentives staff during the enrollment of women with high-risk pregnancies on ANC booking days. New Incentives has initiated talks with a non-profit organization regarding bed net donations. Eventually New Incentives could set-up a voucher system and collaborate with local shops for the net distribution.

Verification of the conditions is primarily based on cross-checking clinic records (ANC visits, delivery at facility). New Incentives is currently also looking into an electronic verification system that could complement the clinic records, if necessary. This system would allow beneficiaries to check in at clinic wards with smartcards or tokens.

Enrollment will be carried out in-person by a New Incentives Field Officer on ANC booking days (usually one specific weekday per clinic).

The **cash transfers** are issued (a) after enrollment on ANC booking day and (b) after delivery at the hospital. The total amount of the cash transfer will be \$115 per woman. The incentive after delivery will be the highest amount paid out as resistance against facility delivery is high.

Eligibility: To prevent perverse incentives a woman may only participate once every four years. The four-year time period is based on national family planning recommendations and was designed to promote child spacing. New Incentives will track beneficiaries with biometric face recognition to avoid a woman from signing up at different clinics for the same pregnancy or for several pregnancies within the four-year period.

Supply-side effects will be carefully monitored and assessed on a regular basis. Staffing for the program rollout includes time to make regular visits to each clinic outside of normal clinic interactions. These visits will be used to monitor deliveries and the quality of maternal care services. It will also provide adequate time to receive feedback from facility staff and identify potential negative effects of demand creation on facility delivery services from early on.

The following table outlines the structure of the program.

	Pregnancy	Delivery
In-Person Enrollment	X	
ANC Visit Verification	X	
IPTp Verification (second IPTp verification completed using clinic records)	X	
ITN handout	X	
Facility Delivery Verification		X
Cash Transfer Issued	X	X
Cash Transfer Amount	6000 Naira (\$31)	16,000 Naira (\$84)

Rollout

The CCTs for High-Risk Pregnancies is planned to be introduced in select clinics in Akwa Ibom State beginning in April 2015 with a training and pilot starting in March 2015.

Clinic selection would focus on the following criteria:

- Situated in high-poverty areas based on poverty statistics by local governing areas (LGAs)
- High volume of pregnant women
- High percentage of high-risk pregnancies
- Low facility delivery rate
- Adequate supply side (staffing, quality of services) determined using clinic assessment protocols

Data collection for clinic targeting will start in February 2015, pending approval of the Honorable Commissioner of Health.