



TEAM KENYA NASCOP

Agencies Represented: Ministry of Health National AIDS & STI Control Program (NASCOP)

Problem: 6.9% of women and 4% of men in Kenya aged 15-49 are infected with HIV; 80% of infants exposed to HIV will die by their 5th birthday; only 50% of infants are tested for HIV in their first 2 months

Policy: Early infant HIV diagnosis through a point-of-care testing pilot program

Objective: Move the equipment required to conduct infant HIV diagnostic tests from central laboratories to local clinics (at the point-of-care) to reduce turnaround time for test results, increase follow-up, and facilitate early treatment and care for HIV+ infants

Funding: The Global Fund to Fight AIDS, TB, and Malaria; PEPFAR; and the Government of Kenya

THE PROBLEM:

In Kenya, 6.9% of women and 4% of men aged 15-49 are infected with HIV, and over 120,000 children under the age of 14 are living with HIV.¹ Currently, the mother-to-child transmission rate is 6.1%. Without treatment, 80% of infants exposed to HIV will die by their 5th birthday.² To prevent this, all HIV-exposed infants should be tested for HIV within 2 months of their birth, ideally when they visit the clinic to receive vaccinations 6 weeks after birth. However, early infant diagnosis of HIV (EID) is only happening 50% of the time.³ Even when infants do undergo testing, it can take up to 30 days to receive the test results, because the blood samples must be shipped from the local clinic to a central lab with the right equipment to perform the test and read the results. Due to that long timeframe, families may not visit the clinic again to inquire about the results, and clinic staff may be unable to track down the families. Worse, that long turnaround time for test results means up to 30 more days before HIV+ infants start antiretroviral treatment, which may be too late.

THE POLICY:

The National AIDS & STI Control Program (NASCOP) at the Ministry of Health is responsible for training health care workers to test infants for HIV at their 6-week immunization visits. However, because of the low frequency of early infant HIV testing, and the long turnaround time to receive test results and start treatment for HIV+ infants, NASCOP searched for a new strategy. Currently, health care workers take blood samples from HIV-exposed infants at local clinics and send them to central laboratories in the major cities, because only these large laboratories have the expensive equipment needed to process the samples and read the test results. NASCOP hypothesized that bringing more of these machines closer to the local clinics where infants are actually tested could reduce the turnaround time to read test results, to the same or the following day, which would facilitate earlier treatment for HIV+ infants. This is known as point-of-care testing.

To oversee HIV testing and treatment, each of Kenya's 47 counties has an HIV Prevention and Control Director, who conducts monthly surveys and gives results to the County Health Director. Results from every HIV test conducted by the central laboratories are automatically uploaded into a central data dashboard that allows users, including the County Health Directors, to track anonymized HIV test results by county and even by clinic. The data is relatively complete, easily available, and of good quality. NASCOP can use this data to understand the characteristics of mothers who seek testing, and

¹ UNAIDS Kenya Country Profile. <http://www.unaids.org/en/regionscountries/countries/kenya>

² Newell, Marie-Louise, et al. "Mortality of infected and uninfected infants born to HIV-infected mothers in Africa: a pooled analysis." The Lancet 364.9441 (2004): 1236-1243. <https://www.ncbi.nlm.nih.gov/pubmed/15464184>

³ eid.nascop.org

whose infants test positive for HIV. Some counties have been able to use this data to pinpoint areas with higher likelihood of HIV+ infants, and mobilize resources to conduct testing during targeted home visiting. Despite the availability of this data, following up on test results to start treatment for HIV+ infants remains a challenge. The NASCOP pilot project will assess whether point-of-care testing, by making more testing machines available at local clinics that serve areas with a high prevalence of HIV+ infants, can address these challenges and reduce infant mortality from HIV.

IMPLEMENTATION PLAN AND STATUS:

The point-of-care pilot project uses a hub and spoke model, identifying clinics in areas with prevalence of infant HIV, or clinics with high volumes of infant HIV testing, to serve as testing hubs. These clinics will house the necessary equipment to conduct the diagnostic tests and read the results. Since it does not make financial sense to purchase this expensive equipment for every clinic, lower-volume clinics, the spokes, will send tests to the hubs, which will be closer (within 60 to 100 km) than the central laboratories in major cities, ensuring that test results get back to the local clinics and families faster than in the current model. With the new model, NASCOP seeks to optimize the use of each testing machine, the number of health care workers who must be trained to use them, and the distance and time it takes to send test results from the spokes to the hubs and back.

In 2017, NASCOP rolled out the pilot project with 3 testing hubs supporting 36 spoke clinics. Already, lessons from monitoring the initial group have informed the establishment of new hubs and spokes in additional counties in 2018. The pilot will end in July 2019 with an expected 45 hubs with point-of-care testing machines serving 685 spoke clinics.

KEY CHALLENGES:

- Staff capacity: Local health care workers do not always identify and encourage testing for HIV-exposed infants. Additional health care workers need training to operate testing machines in the hub facilities.
- Data use: health care workers and county health directors rarely use their own data or data uploaded by the HIV testing machines and made available on the central dashboard. Reasons include: they may not know the data is available, they may not have internet access, they may not know how to use the platform, or they may not know how to analyze the data to improve their own performance.
- Follow up: This will remain a challenge even after reducing the turnaround time to receive test results. Too many infants diagnosed with HIV do not start antiretroviral treatment, and no data is currently collected on follow up visits.
- Pilot rollout: Long registration processes and high initial error rates weakened pilot implementation.
- Funding: Historically, funding for the expensive testing machines has come from the Global Fund, PEPFAR, and the Government of Kenya. Purchasing additional machines and operating them in local clinics, where some may be underutilized compared to high-volume central laboratories, will require convincing funding partners of the value of the point-of-care testing model, likely using data and evidence on changes in the frequency of antiretroviral treatment and infant mortality.

ACCOMPLISHMENTS:

- The results of every early infant HIV diagnosis are automatically entered into the central database, which allows NASCOP and other stakeholders to monitor and evaluate the prevalence of infant HIV.

- So far at least, the pilot project has produced a significant reduction in turnaround time for receiving test results, and a 100% between HIV+ infants and their initiation of antiretroviral treatment.

WHAT'S NEXT:

- NASCOP will continue to expand the pilot project to new hub and spoke testing facilities, training health care workers to operate the testing machines at the relevant sites.
- NASCOP is also disseminating findings from the pilot, including via presentations in medical conferences, and plans to use evidence from pilot studies to inform policy change and the incorporation of new technologies and multi-disease platforms in early infant diagnosis.
- At the workshop, the team from Kenya hopes to learn from the successes of other policies that have integrated interventions like infant HIV diagnosis with routine services at local health clinics. Specifically, they are interested in learning how to achieve full implementation without delays. This will entail how to build the capacity of health workers, mobilize resources to scale up the pilot, and monitor and evaluate implementation.
- All HIV testing is currently funded by development partners or the Government of Kenya at the national level, but in the future, county governments will be required to contribute some funding.

Written in consultation with Dr. George Njoroge Githuka, Prevention of Mother to Child Program Manager, National AIDS & STI Control Program, Kenya Ministry of Health, with support from Ari Gandolfo and Kelly Dale. © Results for All, July 2018. For more information, contact info@results4all.org.