

**Researchers**

Mark Dean  
Columbia University

Anja Sautmann  
World Bank

**Staff**

Loïc Watine  
Senior Director, Right-Fit Evidence

Nicoló Tomaselli  
Università degli Studi di Firenze

**Timeline**

2012-2014

**Sample Size**

1,050 households

**Research Implemented by IPA**

Yes

# The Role of Fees and Information in Healthcare Decisions in Mali

## Key Finding Lead Phrase

Removing fees for children's healthcare increased timely use of clinic resources in Mali

## Key Finding Summary

In Mali, families that received subsidized care from the NGO Mali Health were much more likely to bring their child to a clinic on days when they needed to see a doctor. The probability that families that received subsidies would seek care on a given illness day increased by 250 percent over the comparison group, and did not lead to notable overuse of clinic resources.

## Abstract

Reducing child mortality is a high priority for many governments, but policymakers disagree about how to fund children's healthcare. While charging fees may prevent poor families from accessing care, subsidizing care may lead to overuse and wasted resources. Innovations for Poverty Action worked with researchers to investigate the impact of subsidies and health worker visits on use of healthcare among young children in Mali. By monitoring care-seeking behavior and children's symptoms daily, the research team was able to measure both under- and overuse of clinic services. Results showed that subsidies nearly tripled healthcare usage and did not lead to overuse. In fact, when young children were provided with free medical consultations and treatment, families continued to underuse clinic resources. Health worker visits, by contrast, may have discouraged some families from visiting health clinics when

their children needed care.

## Policy Issue

Although worldwide child mortality rates have dropped over the past two decades, 6 million children died in 2015—around 16,000 per day—mostly from preventable causes. Nearly 160 million children under five are stunted due to malnutrition, often brought on by diarrheal disease. In 2013, there were 528,000 malaria deaths in Africa alone, 78 percent of them children under five, and less than 26 percent of children with malaria are estimated to have received adequate treatment.<sup>1</sup>

Improved treatment for acute childhood illness is therefore a global health priority. However, there is debate among policymakers about whether parents should pay for their child's healthcare. On the one hand, charging fees may prevent poor families from accessing care, but on the other hand, subsidizing care might lead to overuse and wasted resources. In addition, caregivers may either overuse or underuse health resources if they do not have adequate information about when to seek medical help for children. This study contributes new evidence on whether reducing costs or improving access to information can increase timely healthcare for children.

## Context of the Evaluation

Mali has shown considerable progress in addressing child mortality since 1990, essentially halving the proportion of children who die before the age of five. Despite this progress, health indicators in Mali remain poor, and infant mortality rates are still among the highest in the world, with 118 out of 1,000 children dying before age five.<sup>2</sup>

The Malian healthcare system is built on a network of community health clinics. Clinics typically have one primary care provider on duty, along with a handful of other staff, and they are attached to a pharmacy that stocks basic supplies and treatment for common illnesses. Public care is partially subsidized by the government and NGOs, but is primarily funded via patient fees.

The Mali Health Organizing Project (Mali Health) aims to improve healthcare quality and access for people living in impoverished areas of Bamako, Mali's capital. This study took place among the poorest third of families living in Sikoro, a semi-urban area on the outskirts of Bamako.

## Details of the Intervention

Researchers worked with Innovations for Poverty Action and Mali Health to evaluate the impact of healthcare worker visits and lower cost healthcare on families' use of health clinics. Researchers randomly assigned 1,050 households with at least one child under five to one of four groups:

1. **Healthcare worker visits:** In biweekly visits, a locally recruited health worker trained by Mali Health assessed the child's health according to a WHO-based protocol and advised the family on whether they should visit the clinic. The health worker accompanied the child to the clinic if necessary, but also counseled the family on home remedies if a doctor's visit was not needed at that time. The health workers also provided general information about health practices and encouraged preventive measures.
2. **Subsidized healthcare:** Mali Health distributed cards to families in this group, which listed the names of all children under five. The card entitled the child(ren) to free consultations and treatment at two local clinics if their illness was due to malnutrition, malaria, vaccine preventable diseases, diarrhea, or acute respiratory infection.
3. **Combined program:** Families received both healthcare worker visits and subsidized healthcare.
4. **Comparison group:** Families were provided neither healthcare worker visits nor free healthcare.

Researchers collected daily data over nine weeks on every child's health status and whether or not the child went to the clinic each day. They then compared this information to WHO standards which prescribe, for a given illness, when a child should be seen by a doctor given his or her symptoms. This allowed researchers to identify "illness days" for each child, which they divided into "early days" (days before a child needed care) and "care-required days" (days during which, according to WHO guidelines, the child should have visited a doctor). Using this detailed information, researchers were able to measure not just aggregate use of clinic resources, but also underuse—days when a child should have visited a doctor, but did not—and overuse—days when a child did not need to see a doctor, but went to the clinic.

## Results and Policy Lessons

The study yielded three main results:

1. **Without subsidies, there was extensive underuse and almost no overuse of clinic resources.** In the comparison group, visits to health clinics were low on days when children required care and even lower on days when they were feeling sick, but not yet in need of a doctor visit. The likelihood that a child saw a doctor on a day when they should have (according to WHO guidelines) was at most 6 percent. Only 10 percent of illnesses that included some days when the child should have seen a doctor actually resulted in the child receiving care. Families were good at discerning when care was not yet needed: almost no families sought care for their children when it was not required by WHO standards.
2. **Subsidized care extensively increased timely use of clinic resources, with almost no increase in overuse.** Families who received subsidized care were much more likely to send their child to the clinic on days when they needed to see a doctor, but were only slightly more likely to send their child to the clinic when they were not ill enough to need a consultation. In the subsidized care group, the probability that families would seek care on a given illness day increased by 250 percent over the comparison group. Over the course of an illness, subsidized care increased the probability of seeking care on a day that children

needed to see a doctor from about 4 percent to about 13 percent on the first day of the illness, and from about 1 percent to about 5 percent on the sixth day of the illness.

Additional visits to the clinic that resulted from receiving subsidized care were concentrated on days when children needed to see a doctor: approximately 82 percent of additional doctor visits due to subsidized care occurred on days in which, according to WHO standards, the child did need to see a doctor. Yet, even in the subsidized care group, in about 70 percent of the illnesses that required medical care according to WHO guidelines, the child never saw a doctor. This is additional evidence that the subsidized care did not increase overuse of clinic resources, a concern for policymakers, but that even with subsidized care, children did not receive medical care nearly as often as the WHO would recommend.

**3. Health worker visits may have increased underuse of clinic resources.** Health worker visits on their own seem to have decreased the likelihood that a child would visit a health clinic, and they did so more on days in which a child needed to see a doctor. In combination with subsidized care, health workers had little overall effect on clinic visits.

Taken together, these results suggest that the primary barrier to timely healthcare seeking for children is cost, not information. Parents were able to identify serious illness in their children; they took their children to the clinic more often on days that required care than on days when their child did not need to see a doctor. Yet, they did not visit the clinic often enough to be in compliance with WHO standards, meaning even subsidized health care did not entirely curb underuse of clinic resources. Researchers believe this remaining underuse is due to the continuing costs of taking a child to the clinic—both in terms of remaining fees paid to the clinic as well as opportunity costs, such as the time away from work required to take the child.

Improving information via health worker visits had little impact in the subsidized care group, because even with subsidized care there was hardly any overuse to curb. However, when care was not subsidized, caregivers appeared to use the new information in ways that led them to seek care less often, for example by relying on the health workers to ensure that the child is not in immediate grave danger.

## Sources

<sup>1</sup> United Nations Inter-Agency and Expert Group on MDG Indicators [2015], WHO Global Malaria Programme [2015]

<sup>2</sup> [The World Bank](#)