LEARNING PAPER

Community-Based Maternal, Neonatal, and Child Health Innovation in Francisco Morazán Sur, Honduras

Financially self-sustaining community health centers demonstrated that providing effective, cost-efficient, and quality primary health care services to rural, low-income communities is feasible.

Project Overview

Location

- Francisco Morazán Department, Honduras

Population covered

- 102,000, including 14,500 children under the age of five and 26,500 women of reproductive age

Timeline

- October 2009-September 2013

Funding

- USAID contribution: $1,750,000
- ChildFund contribution: $737,281

Implementers

- ChildFund Honduras
- Health Secretary of Honduras
- Local child development associations (ADAL and ADACAR)
- Departmental governments, municipalities, and communities
- University Research Co., LLC (technical support)

Introduction

Women and children in low- and middle-income countries often lack physical and financial access to health services, and in poorly resourced areas, the quality of these services may be low. These factors have led to relatively low rates of use of facility-based services in many countries, including Honduras. Consequently, national interest in the use of community resources to provide basic health services continues to grow, which could increase the use of services for those most in need.

Volunteer treating a child with pneumonia.
Photo by ChildFund Honduras team.

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The Challenge

Honduras is one of the poorest countries in Latin America. Over 30% of the country's population does not have access to the national health system. Ministry of Health (MoH) services are insufficient in terms of coverage and inequitably distributed. Health centers are concentrated in the more densely populated areas of each municipality and the number of health personnel is insufficient.[1] Key barriers to using health services in the project area included long wait times, inexperienced staff, stock-outs, and high out-of-pocket expenses for patients. Despite the Government of Honduras' intention to include communities in developing the health system, community-based strategies are poorly defined, and processes, norms, and indicators have not been established.

Overall Project Strategy

Between October 2009 and September 2013, ChildFund Honduras implemented a child survival project in 12 municipalities of southern Francisco Morazán covering a population of almost 102,000, including 14,500 children under the age of five and 26,500 women of reproductive age. The project's goal was to help reduce maternal, neonatal, and under-five child mortality in the project area, which aligned with the Millennium Development Goal[2] targets of 45 maternal deaths per 100,000 live births, 7 neonatal deaths per 1,000 live births, and 23 under-five child deaths per 1,000 live births. The project also aimed to meet health targets set by the Honduran Government. To achieve reductions in mortality, the project had three primary objectives: (1) strengthen maternal and child health in the identified communities, while increasing the quality of and demand for services; (2) systematize a community-based model for health service delivery in the project area, while improving quality, access, and equity; and (3) document, disseminate, and promote the improvement of community-based maternal and child health services, while meeting standards and norms of the national decentralized health strategy. The project was designed to meet these objectives by using an innovative, community-based model of basic maternal, newborn, and child health and nutrition (MNCHN) services to improve health equity and reduce barriers to access, including cost, for rural, low-income women and children.

Innovative Model

To show that health services provided at the community level would improve equity, the project introduced a community-based operational model to implement and expand key MoH services. This innovative model, known as Community Health Units (or Unidades Comunitarias de Salud, UCOS), utilized physical structures that were built using community resources to deliver basic MNCHN services in isolated areas. In addition to the 11 pre-existing UCOS managed by ChildFund, 17 UCOS were established and managed by ChildFund over the life of the project (for a total of 28 UCOS). The location of each UCOS was determined through a community mapping exercise in partnership with the MoH and community. Each UCOS provided a variety of MoH services by integrating them into one delivery point. This approach made services more streamlined and monitoring and evaluation easier, while responding in a timely and inexpensive manner to community needs to complement MoH peripheral facilities. The services included:

- Pregnancy registries;
- Promotion of facility based pre-natal visits and key messages;
- Promotion of hygienic practices for low-risk home deliveries;
- Facilitated transportation for emergency obstetric care;
- Post-natal and neonatal home visits within the first three days of life;
- Counseling on breastfeeding and infant care;
- Routine monthly growth promotion and monitoring activities for children under two years of age and their mothers;
- First-line treatment of diarrhea and pneumonia and referral to local health facilities;
- Community case management of diarrhea, pneumonia, and malnutrition among children under five; and
- Surveillance of maternal and young child mortality.

Four cadres of community volunteers offered these services: trained traditional birth attendants, nutrition monitors, community health volunteers (CHVs), and emergency evacuation committee members. A total of 790 volunteers were trained to provide the aforementioned services over the life of the project. A community health committee was trained to manage the UCOS through a continuous quality improvement process.

What are Unidades Comunitarias de Salud (UCOS)?

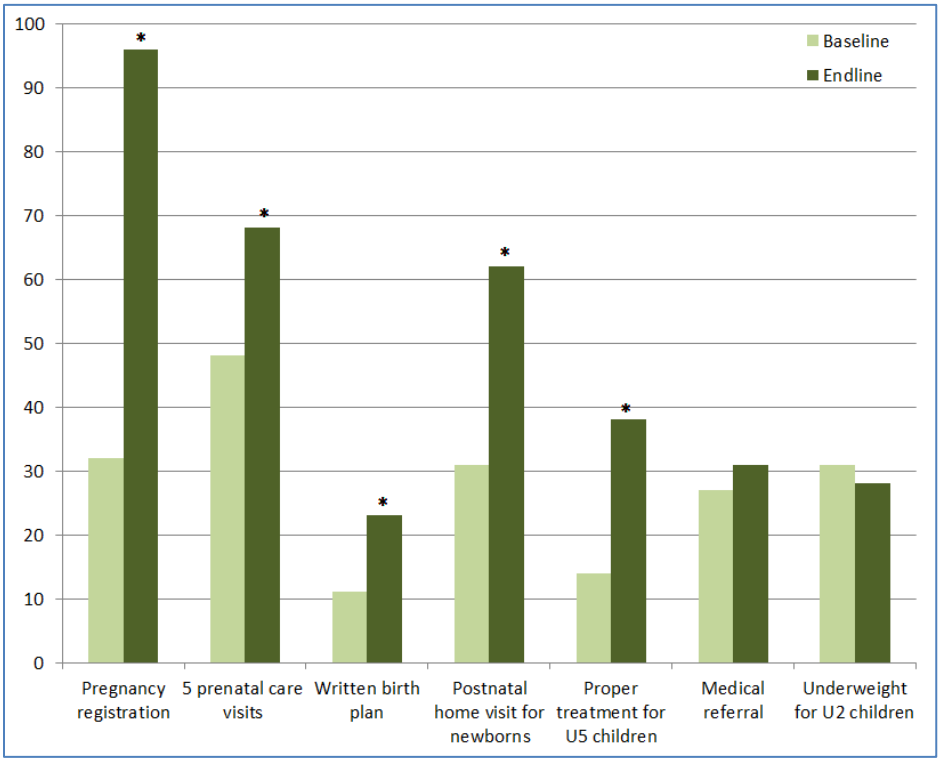
UCOS are small, freestanding structures located in selected communities, equipped with essential drugs, basic equipment, and health education materials. Community volunteers offer care, attention, and education to persons in need, emphasizing women, infants, and children. UCOS are financially self-sustaining, managed by the community, supervised by the MoH, and given technical and logistical support by ChildFund Honduras. UCOS' sustainability depends on a functioning, revolving drug fund.

Assessment

The UCOS model was assessed to see if it provided integrated MNCHN services in hard-to-reach areas while linking closely with the national health system. The specific objectives were to (1) define and standardize the UCOS package for hard-to-reach areas; (2) develop data collection tools to measure key UCOS process and outcome indicators; (3) assess changes in indicators related to the provision of service, coverage of service, and health impact in geographical areas served by UCOS; and (4) determine beneficiaries' out-of-pocket expenses when using UCOS and/or MoH health posts.

The first phase of the assessment focused on activities within eight established UCOS, with a series of formative research activities examining the integration of the MoH's multiple MNCHN services into the UCOS model. The second phase included data collection of both quantitative and qualitative information at all 28 UCOS. This phase used a pretest-posttest single-group design to determine the intervention's adequacy in improving access to health services, increasing service coverage, and reducing out-of-pocket expenses. Researchers interviewed a random sample of mothers with children under the age of five and pregnant women about health service access, coverage, health impact, and out-of-pocket costs. They interviewed 209 women at baseline in 2011 and an independent sample of 209 women at endline in 2013. Cost data on maternal and child health services were collected in 2013 from a sample of 136 mothers of children under two years of age who had visited both an UCOS unit and a health facility during the past three months. Additional focus groups were conducted in six UCOS with a total of 47 respondents (38 women and 9 men).

FIGURE 1: CHANGE IN KEY ACCESS, COVERAGE, AND OUTCOME INDICATORS FOR UCOS IMPLEMENTATION AREAS (CHILDFUND HONDURAS) AT BASELINE (2011) AND ENDLINE (2013). Note: * = statistically significant difference between baseline and endline at $p<0.05$. U5 = children under five and U2 = children under two.



Findings

In its three years of implementation, there was a statistically significant improvement in five of seven key indicators in UCOS implementation areas (Figure 1). Specifically, there was a significant increase from baseline to endline in the number of pregnant women registered by the UCOS (200% increase), the number of women who received at least five prenatal care visits (46% increase), and the number of women who had a birth plan (109% increase). There was also a significant increase from baseline to endline in postnatal care for newborns by a health volunteer within three days after birth (100% increase) and proper treatment for sick children under five by a health volunteer (171% increase). However, there was no significant change in the proportion

of mothers and children who were successfully referred to a health facility, which may be due to the complexity of the referral process. The proportion of underweight children decreased, but not significantly. This was likely due to a multifaceted nutrition strategy where the nutrition monitors were overworked and not adequately supported.

The out-of-pocket (OOP) cost of care given at the UCOS to a sick child under five was US$1.66, which was between 72% and 95% lower than the OOP costs incurred at public health facilities. This outcome constitutes important savings for families and caregivers.

The quantitative findings are enriched by the focus group information, which suggested that through the UCOS model, there have been improvements in the identification of early stages of pregnancy, childbirth services, and the care of children under five. This has been done while promoting early detection of complications at birth, which enables timely referral to the nearest emergency room.

Conclusions

In implementing community-based structures (UCOS) and strengthening the public health system, ChildFund demonstrated the feasibility of providing effective, cost-efficient, and quality primary health care services to rural, low-income women and children in the context of the Honduran National Health System Decentralization. Although there was no comparison group, trends seen before and after implementing the UCOS model went in a positive direction. This evidence, in addition to the qualitative findings from after the intervention, supports continued implementation and evaluation of this model at the national level.

The increase in the use of local health care services among women and children suggests the UCOS model helped make care more accessible. This model brought health services closer to socioeconomically vulnerable households and made using these services more affordable. Furthermore, a local continuous quality improvement process for community volunteers— implemented as part of the UCOS model—strengthened the quality of maternal and child health services (e.g., case management of childhood illnesses, postpartum care for mothers and newborns, maintenance of drug supply) in 23 of 28 sites.

Recommendations

ChildFund's UCOS model should be considered an important input in moving forward the agenda of decentralizing primary health care in Latin America. This project found evidence regarding costs, access, and coverage that supports the feasibility and effectiveness of the UCOS model. The MoH is currently promoting the implementation of primary health care as the National Strategy to address Social Determinants of Health to improve coverage and equity. The current political context provides an opportunity to disseminate and promote learning from this project. The MoH has not yet decided to use this model as part of its National Strategy; however, it is actively participating in the model's implementation.

Use of Findings

These findings have been presented at national and international events. One key event was the October 2013 National Dissemination Workshop in Comayagua, Honduras, which included participation from MoH officials and managers of the Decentralized MoH Model. The workshop's main conclusion was to implement the UCOS model in all of the "aldeas alejadas," which are the hardest-to-reach municipalities. Other recommendations were to continue to educate health authorities about the model and to use the model as an alternative approach to improve maternal and child health at the national level.

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[1] *A total of four professional nurses, 10 physicians, and 52 auxiliary nurses serve a population of nearly 102,000. The project area has a rate of 0.98 physicians per 10,000 people, which is considerably worse than the national average of 8 per 10,000 inhabitants.*

[2] *United Nations. (2014). Millennium Development Goals Report 2014. New York: United Nations.*