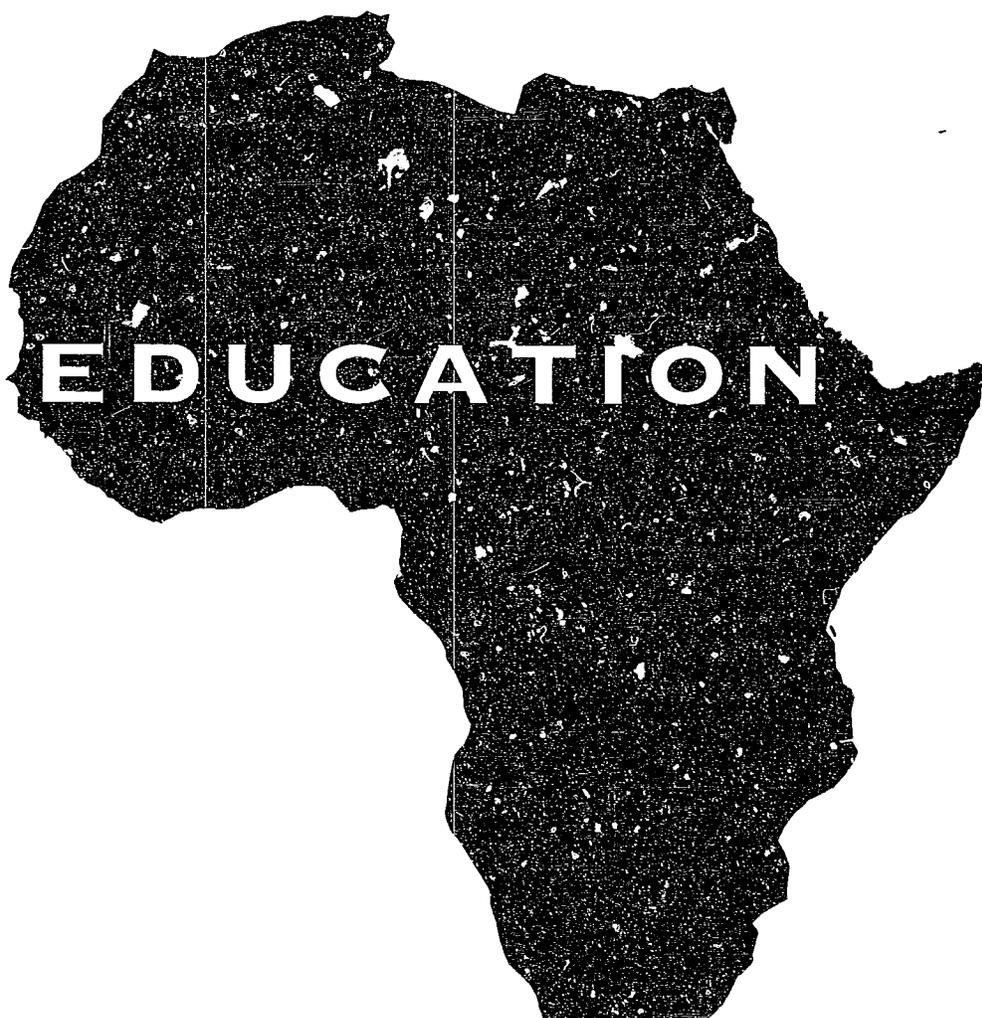


AFRICA CHILD SURVIVAL INITIATIVE  
COMBATTING CHILDHOOD COMMUNICABLE DISEASES  
(ACSI-CCCD)

**WORKING WITH COMMUNITIES  
TO INCREASE THE USE OF HEALTH SERVICES:  
AN EXPERIENCE FROM TOGO, WEST AFRICA**

HEALTH EDUCATION



UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT  
Africa Regional Project (698-0421)



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Public Health Service  
Centers for Disease Control  
and Prevention  
International Health Program Office



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**WORKING WITH COMMUNITIES  
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**UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT**

Africa Regional Project (698-0421)

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**U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES**

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## Abstract

A project in Togo, West Africa, demonstrated that motivated and skilled district health teams can increase community involvement in promoting positive health behavior. Village health committees, village volunteers, health workers, itinerant health agents, and school teachers collaborated with district health personnel in village-wide efforts to increase the use of health services targeted to children under 5 years of age. The project also demonstrated that in areas where health services are accessible, high levels of service utilization can be achieved by villages through a combination of strategies that rely on person-to-person and group methods of communication. Village-level educational programs, which included theater, storytelling, patient education at health facilities, and child-to-child activities in schools contributed to improvements in immunization coverage levels in children 12-23 months of age after less than one year following the educational intervention. The major factors responsible for the success of the project are summarized, and issues related to project replication and diffusion are discussed.

## Introduction

An important objective of “child survival” programs in Africa in the 1980s was to reduce childhood morbidity and mortality by improving access to high quality health services.<sup>1</sup> Increased availability of services, however, did not necessarily result in increased use of these services.<sup>2</sup> Public health education, using both mass media and interpersonal channels of communication, has been used in many developing countries to increase use of curative and preventive services.<sup>3,4</sup> A continuing challenge for public health education programs is to maximize community involvement in health development.<sup>5</sup> A lack of motivated and skilled district health teams has been identified as one major weakness of efforts to increase community involvement in health programs in the 1980s.<sup>6</sup>

A study group of the World Health Organization identified five “mechanisms” that facilitate community involvement in health. These mechanisms are 1) village health committees, 2) community health workers, 3) health campaigns, 4) discussions and local meetings, and 5) drama, dance, festivals, art, and song.<sup>5</sup> In Togo, West Africa, we designed and implemented a village-based project in 1986-90 that combined all five of these strategies to encourage communities to increase their use of selected child health services. The project relied exclusively on interpersonal communication networks, and was carried out by community volunteers trained and supported by health personnel from the district. The use of district-level health education coordinators by the Ministry of Health (MOH) was a strategy intended to contribute to the decentralization of health education services and to the development of human resources at all levels in the health system—central, district, and village.

We present a brief overview of the project (1986-90) in the following section. We then describe how the immunization component of the first phase of the project (1986-88) was designed, implemented, and evaluated in nine villages. We also present the outcomes of the first phase of the project, analyze the major factors responsible for these outcomes, and discuss several issues related to its potential replication and large-scale diffusion.

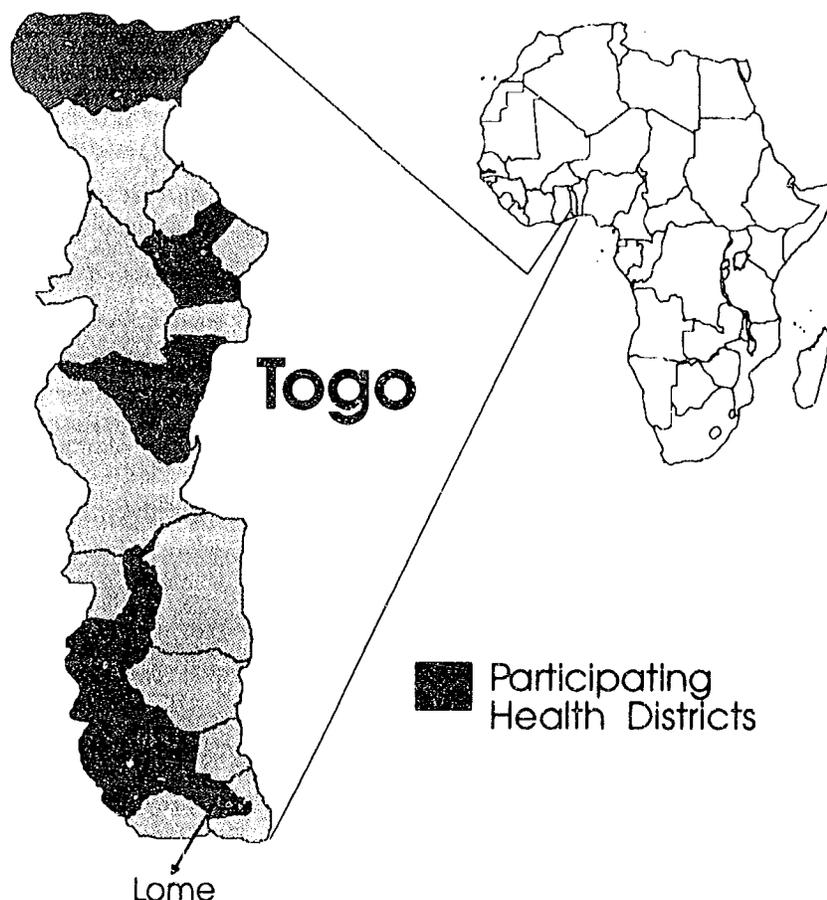
## Overview: Community Health Education For Child Survival

The National Service for Health Education (NSHE) within the Ministry of Health, Social Affairs and the Women's Condition in Lome, the capital city, coordinates health education activities in Togo. The NSHE, in collaboration with the U.S. Peace Corps, designed the *Community Health Education for Child Survival* project between June and September, 1986. The ultimate goal of the project was to reduce morbidity and mortality associated with childhood diarrhea, malaria, and vaccine-preventable diseases. Within this broad goal, the project objectives were to strengthen community health education skills at all levels in the Togolese health system, while simultaneously increasing the use of existing health services by those with access to these services in approximately 42 villages in 21 health districts in the five economic regions of the country.

The NSHE's plan was to implement the project in stages, beginning with nine health districts, and later expanding to the remaining 21 districts (Figure 1). The NSHE selected the initial nine districts based on the following criteria: accessibility by road from Lome to ensure adequate supervision of activities, the likelihood that the chief medical officer in

each district would actively engage in implementing project activities as judged by NSHE staff, and representation from each of the five economic regions of the country.

**Figure 1**  
Health Districts Participating in Community Health Education for Child Survival Project Togo, 1986



At the request of the NSHE and Peace Corps, the chief medical officer from each of the nine districts formed a health education coordinating team composed of two mid-level health workers (nurses, health technicians, or environmental health and hygiene agents) and one Peace Corps Volunteer. District health teams selected target villages from among those located within ten kilometers of the district capital and within five kilometers of a fixed-site vaccination center. The two

primary strategies of the project were *inservice training* at central, district, and village levels to build skills in community health education, and *community education* in target villages to improve the population's use of health services.

The staff of the NSHE provided *inservice training* to district teams beginning in November 1986. The training was cyclical. A training session of approximately six days' duration introduced participants to new concepts and provided them with an opportunity to develop the skills and materials necessary to train others to carry out field activities. The health educators returned to their districts to train local counterparts and to assist in the implementation of activities. District teams then reconvened periodically to share experiences with their colleagues and to learn the next set of concepts and skills. All team members participated in training cycles that focused on 1) survey methods for collecting and analyzing household "practices" data, 2) conduct of focus groups and use of formative data in the design of health education interventions at the village level, and 3) village organization and the development and use of interpersonal communication methods and techniques to educate communities about childhood communicable diseases. Vaccine-preventable diseases, diarrhea, and malaria were the three priority disease interventions of the project defined by the MOH.

*Community education at the village level*, referred to at each site as a "mini health campaign,"\* began in 1987. The district teams worked with representatives of each target village to schedule a three-month period in which to educate families about the importance of prevention and treatment of childhood diseases. This intensive period of education was carried out at approximately the same time in each of the target villages. Three "mini-campaigns" were implemented in each village, one campaign for each of the three disease intervention areas of the project. A timeline that summarizes the training and community education activities of the first phase of the project is presented in Figure 2.

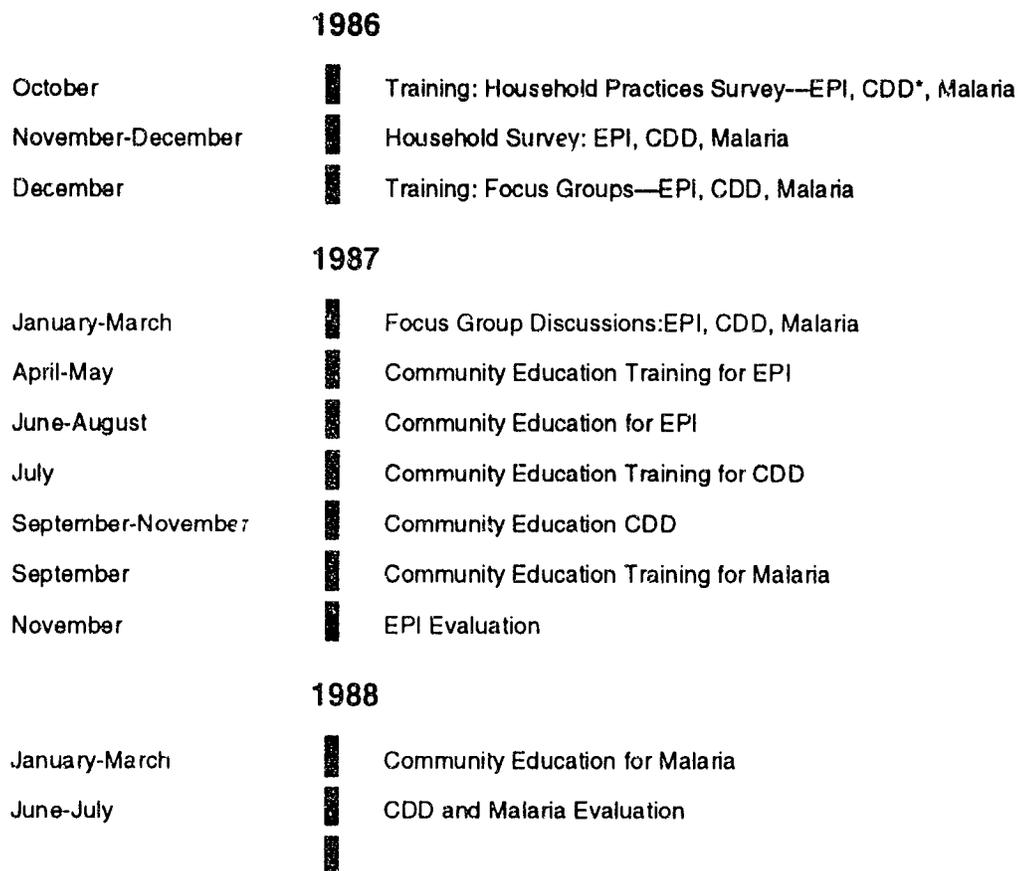
In the next section, we will briefly summarize the Expanded Program on Immunization (EPI) in Togo, and then describe how the immunization component of the first phase of the project was carried out in nine districts.

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\* A "health campaign" is defined by a WHO Study Group as a mechanism "whereby a health issue is promoted at the regional or district level and people's interest aroused and nurtured to secure their future involvement. Teams are developed throughout a region in a mass information operation and seek to involve people in the proposed health action" <sup>5</sup>, p.17.

**Figure 2  
Community Health Education for Child Survival**

**Timeline of Project Activities  
Phase I: Nine Pilot Villages 1986-1988**



\* CCD - Control of Diarrheal Diseases

## Increasing Use Of Vaccination Services

### *EPI in Togo*

The Expanded Program on Immunization began in Togo in 1980. By 1986, Togo had established a well-developed infrastructure for delivering EPI services.<sup>7</sup> The primary objective of the immunization component of the village project was to obtain, by 1990, 80% coverage levels for all EPI antigens for children between 12 and 23 months of age.

Vaccinations are provided free of charge to children under 2 years of age and women of childbearing age, either through fixed vaccination centers or by mobile teams that travel to villages located more than five kilometers from a fixed center. National policy recommends that a child's vaccination history be documented on a card provided by the government and retained by the child's mother or other family member. National coverage surveys carried out in 1987<sup>7</sup> and 1988<sup>8</sup> reported that an estimated 43% (1987) and 93% (1988) of children 12 to 23 months of age had vaccination cards. However, coverage rates for completion of five scheduled contacts remained low. In 1987, only 32% of Togolese children 12-23 months of age were estimated to have received all antigens recommended by EPI (complete coverage).<sup>7</sup>

### ***Baseline Assessment of EPI Coverage Levels in Nine Project Villages***

In October 1986, district health teams participated in the first workshop of the inservice training cycle. The workshop was designed to increase team members' ability to collect and analyze household "practices" data. After the workshop (November 1986), district health teams trained and then collaborated with village volunteers to conduct household interviews with mothers of children under 5 years of age in each of the nine target villages. A census sampling design was used in each village: all mothers of children under 5 years of age were included in the survey. The survey instrument assessed a broad range of practices related to vaccination of children under 2 years of age, and the home case management of diarrhea and fever for all children under 5 years of age. For the immunization component of the survey, teams asked mothers to produce a vaccination card for each child, recorded the information on a household questionnaire, and then tabulated the data from all households by using a prepared tally sheet. Baseline data were available for seven of the nine villages. One village did not follow the survey protocol and a second village misplaced the data in the field.

Among the 307 children 12 to 23 months of age in the seven villages for which complete data are available, 60% had vaccination cards ( $184/307$ ). Card-documented vaccination coverage levels for children under 2 years of age were calculated for 307 children in the seven villages. Fifty-nine percent ( $181/307$ ) and 36% ( $110/307$ ) of children had received DPT 1 and DPT 3 vaccine, respectively. Forty-five percent ( $138/307$ ) of children had received measles vaccine and only 32% ( $98/307$ ) had received all vaccines. The proportion of children with complete coverage in each village ranged from 10% to 82%. The highest level of

coverage was documented in the village of Tenega in the Kozah district; this was attributed by the NSHE staff to the long-term outreach activities of the district health coordinator, a trained nurse who resided in Tenega and worked in a fixed-site vaccination center.

### ***Formative Research and Intervention Design***

In December 1986, district health teams participated in the second workshop of the inservice training cycle. The objective of the training was to increase team members' ability to conduct and use formative research, particularly focus group methods, as the basis for designing health education interventions. After the workshop, each district health team, with assistance from NSHE staff, conducted three focus groups on each of the target diseases with mothers of children under 5 in their pilot village. A total of 324 women participated in the focus groups, with an average group size of 12. For the immunization component, focus group discussion guidelines addressed mothers' understanding of the etiology and severity of diseases targeted by the EPI, their perceptions of the benefits and difficulties of obtaining vaccination for their children, and their ideas about how to increase vaccination coverage.<sup>9</sup> Further information on the use of focus groups in the project is available elsewhere.<sup>9,10</sup>

### ***Community education***

#### **1. Educational Materials and Training of Trainers**

The NSHE team used the baseline survey and focus group results to design training manuals, which were adapted and used by district teams to train volunteers and other representatives of the village to carry out a variety of educational activities. Instructional, visual, and promotional support materials were also developed to accompany each manual. In a third inservice workshop, the central NSHE team trained district teams in how to adapt and use these manuals and materials.

#### **2. Village-Level Training**

District health teams worked with village health committees, village volunteers, health workers in vaccination centers near the villages, itinerant health agents in the villages, and teachers from nearby elementary schools to implement educational activities. Respected members of the community comprised the *village health committees*. The district health teams trained the committees to 1) convene and facilitate village meetings and discussions concerning the organization and implementation of the mini-campaigns, 2) assist health workers during vaccination sessions, and 3) follow-up and support village volunteers and school teachers in their efforts to encourage families to use vaccination services.

Influential community women ("women leaders"), farmers, school teachers, students, and members of the village health committees volunteered their time to work on the mini-campaigns. The training of these *village volunteers* focused primarily on interpersonal communication methods, such as storytelling, popular theater, and face-to-face

information-sharing. Trainers demonstrated the use of prototype story lines, fables, and scripts, but suggested that volunteers adapt these examples to local circumstances. At the conclusion of the training, trainers provided village volunteers with T-shirts to encourage them, to foster an esprit de corps, and to identify them as credible sources of information for the community.

District teams trained *health personnel* to provide continual reinforcement of campaign messages at nearby health centers. The facility-based educational approach adopted for the campaign was known as the “warm chain”, in contrast to the “cold chain” for keeping vaccines cool. The “warm chain” consisted of a series of educational encounters between the health worker, frequently assisted by one or more village volunteers, and a mother, carried out at strategic moments during a vaccination session. The objective was to engage a mother’s attention and participation from the time she entered the facility to the time she departed.

District health teams introduced “child-to-child” health activities <sup>11</sup> to elementary *school teachers* and encouraged them to incorporate these activities into their regular health curriculum. These activities, in the form of prototype lesson plans, included both classroom and out-of-school exercises for students.

### 3. Village-Level Educational Activities

Mini-campaigns began in each village with a community-wide meeting convened by the local chief. Political, administrative, health, and traditional leaders, as well as community members, attended this public gathering. Most meetings began with songs and dances by villagers; all included a ceremonial vaccination of the first child of the campaign by the district administrator. Village volunteers introduced and demonstrated the educational activities they had prepared. In some instances, promotional materials were distributed to the village volunteers, and local press coverage often resulted in photographs and articles published in Togo’s national newspaper.

Although mini-campaigns in all villages included similar activities, the content, sequencing, and intensity varied from one village to another according to local needs and circumstances. Village volunteers performed the theater skit repeatedly at public gatherings, and told stories in both small and large groups at various sites throughout the village. Both the theater piece, which dramatized an annual meeting of the six EPI diseases, and the fable (a story of a field mouse who saved village children by revealing the protective powers of vaccines) were diversely and creatively interpreted by the volunteers. In certain villages, the volunteers organized home visits to assess vaccination status; in others villages, they escorted mothers and children to local vaccination sites. Special flags and T-shirts identified village volunteers as sources of information about vaccination. Banners were used to designate the site of vaccination-related educational activities.

Health workers carried out patient education activities during vaccination sessions in accordance with the “warm chain” methodology described previously. Mothers received

different messages at different vaccination stations. For example, while mothers waited to register their children, a health worker used a flipchart to communicate the five key vaccination messages of the campaign. While the vaccine was being administered, the health worker reassured the mother that the child's discomfort caused by the injection was temporary. At the exit, health workers confirmed each mother's understanding of appropriate follow-up actions in the home.

Teachers delivered child-to-child lesson plans in schools. These lesson plans encouraged school children to assess the immunization status of their younger siblings, to inform their parents of actions needed (if any) to complete the siblings' vaccinations, and to share their findings and activities with peers and teachers at school.

#### 4. District Team Support

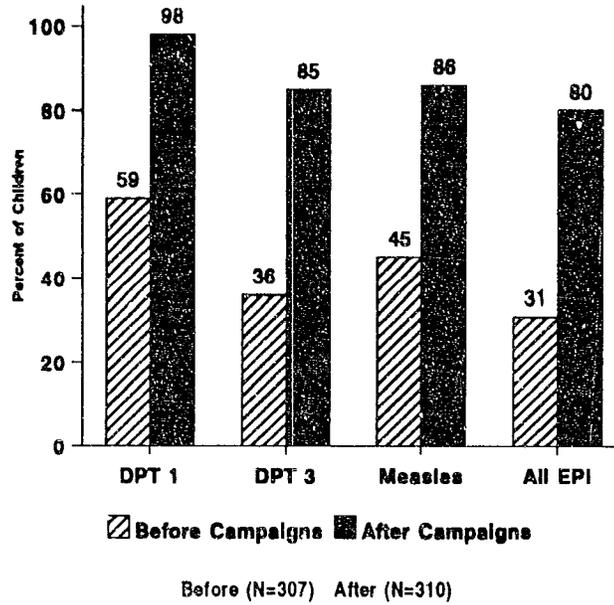
District teams supported village volunteers through regularly scheduled visits. During visits, district personnel observed volunteer performance, provided immediate feedback, offered encouragement and support, and addressed any difficulties in campaign implementation identified by volunteers.

### *Evaluation*

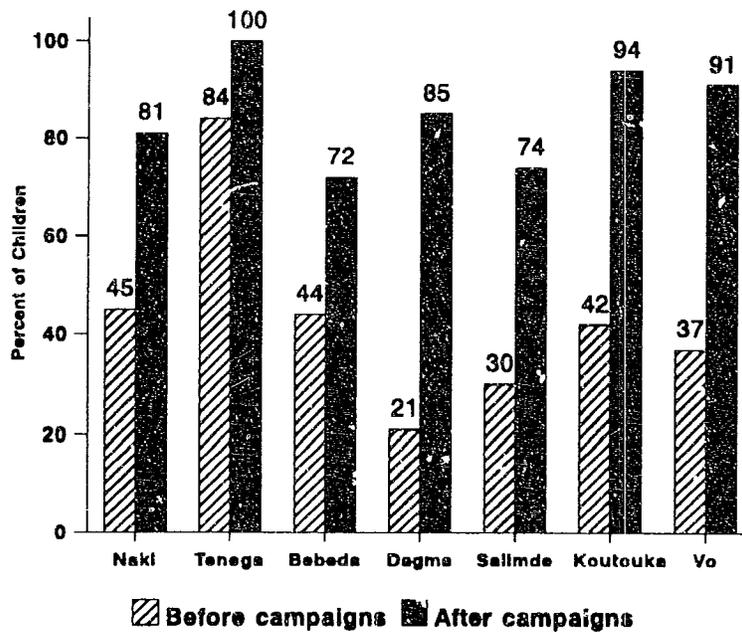
The immediate outcomes of the campaign were evaluated through a re-administration of the baseline survey in December 1987, approximately three months after the end of the formal campaign period. The methods and procedures of this survey were identical to those used at baseline. Seven villages reported card-documented vaccination coverage levels among 310 children 12 to 23 months of age. A comparison of pre- and post-campaign coverage levels for selected antigens and the coverage by all EPI antigens for all villages are presented in Figure 3. The proportion of all children who had received DPT1, DPT3, and measles antigens rose from 59%, 36%, and 45%, to 98%, 85%, and 86%, respectively. The proportion of all children who had completed the full EPI schedule rose from 31% before the vaccination mini-campaigns to 80% after the campaigns.

Increased coverage was documented in all villages, as illustrated in the pre- and post-campaign levels of measles coverage for seven villages (Figure 4). In villages where coverage was low prior to the mini-campaign, increases were dramatic. In Tenega, where full coverage was 82% before the mini-campaign, 100% of children with vaccination cards had received all EPI antigens after the intervention.

**Figure 3**  
**Card-documented vaccination coverage levels among children aged 12-23 months in each of 7 villages in Togo before and after mini-campaigns.**



**Figure 4**  
**Card-documented measles coverage levels among children aged 12-23 months in 7 villages in Togo before and after mini-campaigns.**



## Discussion

In the seven villages reporting post-campaign coverage levels, significant improvements were documented for all antigens following the health education intervention. The primary objective of the immunization component of the project—80% coverage levels for all EPI antigens—was attained in each target village. A one-group pretest-posttest design was used in each village to evaluate the effects of the intervention. Although the design would have been strengthened through the use of a control group, we are confident that the documented increases are attributable to the EPI mini-campaigns for the following reasons. First, to our knowledge, there were no other interventions or service delivery improvements implemented during the time of the intervention that could account for the increases in health services utilization and EPI coverage reflected in the results of this study. Second, the one-year time interval between the two household surveys makes it unlikely that increases in coverage rates can be attributed solely to increased motivation or awareness caused by the baseline survey. Third, the one-year time interval between the surveys was sufficiently short to rule out attribution of increased vaccination coverage in the project villages to normal developmental changes in health service utilization in Togo.

This first phase of the project demonstrated that motivated and skilled district health teams can foster broad community involvement in 1) assessing household practices associated with child health, 2) identifying the behavioral and structural determinants of these practices, 3) promoting healthy behaviors through a systematic educational intervention, and 4) evaluating the success of the intervention. It also demonstrated that in areas where health services are accessible, high levels of use can be achieved in villages through a combination of strategies that rely on interpersonal methods of communication. District health teams, in collaboration with each community, identified every available and credible channel of communication, and promoted the use of a broad range of educational methods that built on oral traditions in each village. Also, the five key educational messages shared in the village through a variety of methods were consistently reinforced by health workers during vaccination sessions.

Unfortunately, civil disturbances in Togo since 1990, limited resources, and new health sector initiatives have prevented an evaluation of the extent to which coverage levels have been maintained in these initial villages or activities have been extended to additional villages within the nine pilot districts. There is evidence, however, that the capacity-building approach of the project yielded long-term benefits beyond improved utilization. The inservice training program instituted in the nine pilot districts developed a cadre of personnel skilled in the planning, implementation, and evaluation of health education programs. The development of these capacities is far more important than immediate increases in vaccination coverage levels, but far more difficult to measure. Evidence of the effectiveness of the inservice training program includes “second-generation” dissemination of the skills gained through training. For example, members of the original district teams became “master” trainers for personnel from other districts. In 1988 and 1989, the “master trainers” trained their colleagues from the 12

remaining health districts and nine subdistricts in Togo, thereby expanding the cadre of trained personnel. Materials developed and refined during the first phase of the project were adapted and used in subsequent mini-campaigns in other villages, as well as in a national vaccination campaign.<sup>8</sup> The play developed by NSHE was adapted and performed by the Togolese national repertory theater company on television and radio. Recently, the U.S. Peace Corps produced a video of the project for staff training and recruiting purposes throughout the world.<sup>12</sup>

Some aspects of the project merit careful consideration before this particular approach is replicated elsewhere or on a larger scale. *First*, MOHs that choose to adopt this kind of approach must first ensure that the service delivery infrastructure can adequately respond to increased demand. While this poses no serious problems for small-scale projects, organizers of large-scale efforts to increase utilization of preventive or curative services must plan carefully and monitor activities closely to ensure adequate supplies in health centers. For example, vaccines and other immunization supplies would need to be available in health facilities to respond to increased demand for services.

*Second*, the MOH and collaborating agencies in Togo were willing to support a systematic, incremental strategy of careful planning, inservice training and village-level mobilization that yielded important, but not immediate, results. For national programs, such gradual and labor-intensive approaches at the district and community level may require strategic planning and some re-education of donor agencies.

*Third*, the focus groups conducted in the project villages provided a rare but valuable opportunity for health workers and community members to communicate with and learn from one another outside the formal health care setting. The collection, analysis, and use of qualitative data obtained through focus groups, however, posed several operational challenges and raised certain questions regarding the appropriateness of the method and the validity of the findings.<sup>9</sup> These challenges need to be addressed before this kind of formative research is replicated in other villages. Advances in the use of rapid anthropological assessment procedures since 1986 should be studied carefully and taken into consideration in future endeavors of this kind.<sup>10, 13</sup>

*Fourth*, the excitement and heightened attention that accompany demonstration projects<sup>14</sup> probably increased the motivation of national- and district-level health personnel, as well as village volunteers and the families living in the target villages. Also, funding, personnel, and other logistical resources were sufficient for the first phase of the project. As the approach is institutionalized, however, careful attention must be paid to the motivations of all participants in the process and the availability of resources to ensure long-term success. District teams worked with one village during the pilot phase. If this approach is to be applied district-wide, chief medical officers would need to ensure that adequate time, as well as human and financial resources, will be available to meet the needs of multiple villages within each district. For example, while additional training costs would not be

required for district teams\*, recurrent costs for vaccination campaigns in new villages would be needed for additional promotional and educational materials, as well as for transport costs for training of village workers and for supervision by national and district personnel. Communities may also be able to generate and use funds to support recurrent costs of project activities.

*Fifth*, the village-based project was able to have a marked impact on vaccination coverage because of its ability to target all families in the participating villages. To achieve adequate coverage of the target population for childhood immunizations on a national scale, educational programs may have to diversify and expand their channels of communication. For example, the mass media may be used to complement the face-to-face channels of communication. A national vaccination campaign implemented in Togo in 1988, titled "Action Vaccination Togo", attempted to combine person-to-person educational methods with mass media communication.<sup>8</sup> The results achieved by this approach, and the MOH's ability to sustain it, should be studied carefully by other countries before mounting similar efforts.

*Sixth*, program evaluation would be strengthened by 1) a research design that allowed comparison of the intervention villages to other villages that did not receive the intervention, and 2) measurement of the intermediate effects of the intervention, such as changes in district health team and local health worker performance, as well as changes in community problem-solving. Better documentation of project processes through an on-going monitoring system that tracked inservice training activities and village-level educational activities would also improve future applications of the approach.

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\* The financial cost of the project (including activities in diarrhea and malaria) were approximately \$45,000 over 3 years. Of this amount, about \$36,000, or 80%, was used for training district teams.

## Conclusion

The systematic development of skills at village, district, and national levels in Togo should allow the continuation of community health education activities, even with only limited input of additional resources. Our experience with the village-based project suggests that various forms of interpersonal communication strategies utilizing multiple channels, building on oral traditions and delivering consistent and simple messages at high intensity over a limited time frame, helped achieve significantly higher vaccination coverage levels while contributing to capacity-building within the public health system. Since many of the constraints to child health and survival are linked to behavioral problems that cannot be addressed adequately without increasing community involvement, approaches that support communities to adopt healthy behavior can be important contributors to achieving health for all.

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