IMPROVING CHILD HEALTH IN CAMBODIA

BASICS III

Documents referred to in this chapter may be downloaded by clicking on the yellow-highlighted titles.

I. Background

In September 2006 BASICS was awarded a Task Order to strengthen child survival in Cambodia. The program focused on three areas of implementation; support to the Child Survival Management Committee, costing health services and community based case management of childhood illness.

Results and Achievements

II. Support to the Child Survival Management Committee at Central Level

BASICS Cambodia was tasked with building the institutional capacity of the Child Survival Management Committee (CSMC). This committee was formed in order to promote a child survival agenda across the various ministry departments. The overarching goals of the CSMC are to bring child health to the forefront of the health agenda, standardize child health objectives and mobilize national and international support. BASICS led the development of the Terms of Reference of the CSMC and assisted in the orientation and general organization.

The first major accomplishment of the CSMC was the completion of the Cambodian Child Survival Strategy (CCSS) for 2006-2015 which included a goal of achieving universal coverage of a limited package of essential evidence-based, cost-effective interventions that impact child mortality. The strategy aimed to achieve this coverage through the implementation of twelve interventions, known as "scorecard" interventions, which were determined to have the greatest impact on mortality for children under five. The scorecard interventions include early initiation of breastfeeding, exclusive breastfeeding, complementary feeding, ORT, antibiotics for pneumonia, ITNs, malaria treatment, Vitamin A supplementation, measles immunization, tetanus immunization, dengue vector control and skilled birth attendance.

BASICS provided significant support both in the creation of the strategy as well as its implementation. In the months following the release of the strategy, BASICS partnered with the CSMC and MOH to organize field visits to various provinces in order to introduce the strategy and provide technical assistance in the organization of provincial committees. These committees were tasked with the development and implementation of their own strategy for achieving the objectives outlined in the CCSS. This resulted in eleven Provincial CSMS that were oriented on the national strategy.

By 2008 the CSMC was functioning as an independent organization through its secretariat while BASICS continued to provide technical assistance in the implementation of the child survival scorecard interventions. In the first quarter of 2008, BASICS worked through the CSMC to create a draft National Nutrition Strategy for Cambodia. In the latter half of the year, the CSMC held a Short Program Review (SPR) to identify training needs in planning skills for child health at the provincial and OD levels, IMCI, and pre-service training for health care practitioners. The SPR committee identified priority needs for child health including newborn health programs, emergency obstetric neonatal care, neonatal tetanus death audit methodology, a comprehensive Child Survival BCC strategy, estimates of annual national child health plan costs, strengthening of HIS, and a systematic review of child health questions for the CDHS.

In the area of child immunization, BASICS supported MOH efforts to change the vaccination package offered to incorporate the Hib Vaccine in the immunization schedule. The National

Immunization Program are currently using the DTP-HepB (tetravalent vaccine); however, beginning in 2010 children will receive the DTP-HepB-Hib (pentavalent) formulation. This intervention will reduce the incidence of pneumonia significantly and reduce costs associated with pneumonia treatment.

In October 2008 BASICS assisted with a WHO-organized workshop on "Program Management Guidelines for Child Health". The purpose of the workshop was to equip program managers with the essential knowledge and skills for appropriate planning and management of child health and child health-related programs to ensure universal coverage of high impact scorecard interventions towards achieving Cambodia's Millennium Development Goals. At the request of the MOH, BASICS facilitated follow-on training extended to the Provincial and Operational District (OD) Child Survival Management Committees. During this time BASICS was also asked to participate in the C-IMCI working group tasked with the revision of the training curriculum. The revised curriculum has been submitted to the MOH for approval and implementation.

In early 2009 the CSMC requested assistance in a mapping exercise of NGO provided child survival interventions in Cambodia. MEDiCAM, a non-profit membership organization for NGOs active in the Cambodian health sector, was selected to lead the initiative with technical and funding assistance from BASICS, UNICEF and WHO. The objective of the mapping exercise was to assist the CSMC in communicating with partners in the field, coordinating activities related to child survival, and linking NGOs to the provincial CSMCs. The completed map and database was presented to the CSMC on March 4th, 2009. It was unanimously agreed that the CS Mapping holds potential to be a valuable tool for coordination and networking among organizations involved in Child Survival activities in Cambodia. The database can be found on the MEDiCAM website (http://www.medicam-cambodia.org/).

II. Cost Estimates for Investing in Health

The BASICS Cambodia project has provided important technical assistance in the area of strategic planning through a series of health costing exercises. The results of these studies have assisted the MOH and donors in all planning phases - short, medium and long term. Furthermore, the studies have helped to mobilize funding for child health and other priority services as well as in the rational allocation of funds for those services.

Based on the Cambodia Child Survival Strategy (CCSS), the seven national programmes implicated in the scorecard activities developed action plans for child survival through the year 2010 which covered eleven of the twelve interventions (skilled birth attendance was not included). BASICS was requested to assist the MOH in determining the cost of national scaling up of the interventions in order to achieve the determined goals. This costing activity was carried out in two phases, a program costing study and a service delivery costing study.

The first component of the costing exercise was initiated in November of 2006 by a team consisting of two BASICS Consultants and one WHO staff member. The team gathered information in Cambodia through an introductory workshop with representatives from implicated programs. This was followed by individual working sessions with each of the programs. Although the primary objective of the exercise was to determine costs for scorecard interventions, the seven national programs requested that their non-scorecard activities be included in order to have complete information. After the initial data collection phase, the team continued to work with the Child Survival Steering Committee (CSSC) to finalize the estimation of all interventions. The final report, *Scaling Up Child Survival Interventions in Cambodia: The Cost of National Programme Resource Needs*, was presented in June 2007.

Table 1
Combined Program and Service Delivery Costs for 2001 – 2015 in US$

Scorecard Intervention	*Total 2010 Unit Cost*	*Total 2011 Unit Cost*	*Total 2012 Unit Cost*	*Total 2013 Unit Cost*	*Total 2014 Unit Cost*	*Total 2015 Unit Cost*
Early Initiation of Breastfeeding	2.71	754,820	855,586	960,081	1,068,414	1,180,696
Exclusive Breastfeeding	2.25	776,328	825,157	875,628	927,788	981,685
Complimentary Feeding	2.47	983,757	1,020,013	1,057,326	1,095,723	1,135,233
Vitamin A	.56	1,206,415	1,272,069	1,339,866	1,409,866	1,482,131
Measles Vaccine	4.82	1,864,741	1,938,263	2,013,980	2,091,950	2,172,234
Tetanus Toxiod	1.06	3,142,730	3,397,711	3,661,634	3,934,754	4,217,335
Insecticide-treated Nets (ITNs)	13.43	2,531,257	2,697,496	2,869,371	3,047,043	3,230,673
Malaria Treatment	2.43	528,405	549,254	570,727	592,838	615,605
Dengue Fever Control	3.30	3,344,772	3,484,585	3,628,654	3,777,091	3,930,014
Oral Rehydration Therapy (ORT)	5.05	8,558,396	9,023,866	9,504,530	10,000,812	10,513,143
Antibiotic for Pneumonia	3.57	5,504,253	5,962,970	6,437,834	6,929,307	7,437,864
Skilled Birth Attendance	n/a	n/a	n/a	n/a	n/a	n/a
		29,195,874	**31,026,969**	**32,919,630**	**34,875,587**	**36,896,614**

After receipt of the program costing study, the MOH and partners requested that BASICS conduct a similar exercise for service delivery. This would include the costing of complete packages of services at the village, health centre and hospital levels and of the scorecard interventions within the context of those packages. This study was carried out in Operational Districts (OD) where services were contracted due to the fact that these costs would reflect the quantities and prices of resources required to provide services in the future. In addition, the MOH requested that the estimates be calculated through 2015. This study resulted in the report, *Scaling Up Child Survival Interventions in Cambodia: Service Delivery Costs*, released in February 2008.

Based on BASICS involvement with the costing of the Child Survival Strategy, the Cambodia MOH requested support on cost estimation for its comprehensive strategic plan, the Health Strategic Plan (HSP) 2008-2015. BASICS was requested to complete costing studies for two components of this plan, the Minimum Package of Activities (MPA), which includes all health center and community services, and the Complementary Package of Activities (CPA), which includes all district and provincial hospital services. These were more comprehensive and detailed costing studies than the ones done for child survival.

The MPA costing study, *Cost and Funding Projections for the Minimum Package of Activities for Health Centers*, used incidence and prevalence rates together with catchment population figures to estimate the number of each type of service expected for different levels of coverage. The model determined the projected costs associated with the delivery of a particular health service based on staff time, drugs, medical supplies and tests required plus a proportional cost for operational expenditures. A supplementary study, *Costs and Revenue Comparisons for a Sample of Contracted and Non-Contracted Health Centers*, was subsequently released which compared costs of service delivery across several sampled health centres..

A similar model was utilized in order to estimate cost for the CPA and was detailed in the report *Cost Projections for the Complementary Package of Activities for Referral Hospitals*. This exercise was carried out by first determining actual costs for a small sample of hospitals as well as any additional resources needed. This information was utilized in conjunction with the norms outlined in the CPA guidelines to determine estimates for full implementation. These results were then compared with other costing studies. The results of the costing exercise for the MPA and CPA were disseminated to the MOH and partners for their review, and were taken into account in the strategic planning.

Table 2

Projected Costs by Type of Service for Health Center Serving 10,000 People (US$)

	60% Need	*60% & CSS 2010 Targets*	*90% Need*
Total cost of curative services	19,414	21,482	28,465
Total cost of preventive services	8,633	11,115	12,592
Total cost of other services (delivery, etc)	2,220	3,025	3,206
Total cost of all services	30,267	35,622	44,263
Cost of curative services per capita	1.94	2.15	2.85
Cost of preventive services per capita	.86	1.11	1.26
Cost of other services per capita	.22	.30	.32
Total cost per capita	3.02	3.56	4.43
Average cost per curative service	2.51	2.59	2.46
Average cost per preventative service	.99	1.01	.96
Average cost per other services	13.22	15.97	12.72
Average cost for all services	1.82	1.83	1.78
Cost for Reproductive, Maternal, Newborn and Child Health	14,418	19,083	20,977
Cost for communicable diseases	12,667	13,124	18,686
Cost for non-communicable diseases	3,182	3,416	4,600
Total cost of all programs	30,267	35,623	44,263
Cost of Child Survival Scorecard (included in RMNCH)	7,615	10,916	11,105
Cost of HIV/AIDS (included in RMNCH and CDC)	1,217	1,227	1,818
Cost of TB Treatment (included in CDC) Total	3,055	3,163	4,502
Total Cost of selected programs above	11,886	15,306	17,425
Other RMNCH, CC and NCD services	18,380	20,317	26,838

III. Community Case Management of Childhood Illness as a Delivery Strategy to Extend Coverage and Effectiveness of Health Services

In Cambodia, the Community Based Case Management (CBCM) approach applied to management of pneumonia was first introduced by the MOH in partnership with WHO, the European Commission for Humanitarian Aid (ECHO) and Pharmaciens Sans Frontieres (PSF) in 2005-6. The pilot involved existing Village Malaria Workers (VMW) in diagnosis and treatment of malaria and pneumonia in 52 villages of Stung Treng Province. While the experience was generally positive with VMWs demonstrating correct treatment protocols, sustainability emerged as an issue with the VMW supervised centrally rather than on the PDH/OD levels and drug supplies running out for ARI treatment.

BASICS collaborated at the national level with the Community Participation Task Force (CPTF) to revise the structure of Village Health Support Groups and to expand the level of responsibility that VHSG volunteers can assume for child health. The recommended policy changes took into account the experiences of the above CBCM program, but focused on the treatment of Acute Respiratory Illness and Diarrheal Disease. In addition, the program stresses home-based care for sick children and referral to the health center in the event of serious illness. Prior to the development of this initiative, CBCM was not a stated goal of the MOH, even though many villages have little or no

access to health centers. In November 2008, BASICS convened a workshop for USAID and USAID-supported NGOs to introduce them to the potential of CBCM for reducing child mortality in Cambodia. As a result of the workshop, several NGOs expressed interest to initiate CBCM interventions in their working districts.

BASICS participated in a pilot project for CBCM of ARI and diarrhea in partnership with the MOH, CARE and WHO. Building on the experience from Stung Treng, the pilot targeted remote areas of two districts of Koh Kong Province covering twenty-six villages. The overall goal of the project was to explore the feasibility of using village-based volunteers to effectively diagnose and treat uncomplicated cases of ARI, fever and diarrhea, and refer severe cases to the nearest health facility. These volunteers functioned under the supervision of the OD/PHD and Health Center (HC) staff. The objectives of the project were to:

1. Train Village Health Support Groups (VHSG) to diagnose and treat children under five suffering from diarrhea and pneumonia.
2. Train PHD, OD and Health Center staff to effectively monitor and supervise the VHSG delivering CBCM.
3. Integrate community health mobilization and health education activities at village level to generate high demand for proper service utilization and compliance.
4. Increase the number of cases of pneumonia and diarrhea disease treated in KK province.

The pilot project was comprised of four key processes. First was post training support to the VHSG. This included monthly supervision visits by the health center staff for direct observation and immediate feedback. VHSGs were also visited quarterly by the PHD/OD for similar supervision. In addition to these visits, VHSGs were brought together in group settings in order provide an opportunity to interview the volunteers, to facilitate group discussions and for further monitoring from project staff. The second process was Behavior Change Communications activities that were realized by the VHSGs. This included both home visits and presentations at public events. Thirdly, a process for drug management was implemented in order to assist the volunteers in the treatment of sick children. Drugs were donated by partners and supplied through existing channels. Lastly was the process of data management. A system of collecting important data was instituted which included the creation of forms, databases and reports. This system was improved upon throughout the pilot in order to increase the use of data for planning, monitoring and decision-making.

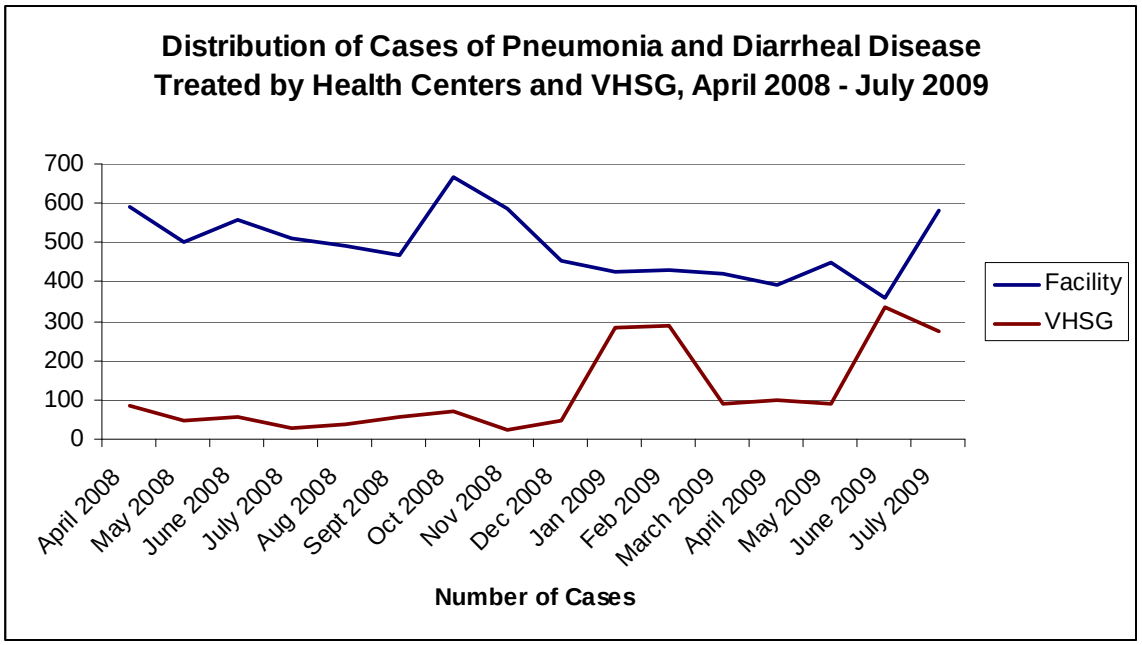
Through this pilot project, forty-six VHSGs were trained to provide services to approximately 12% (n= 15,800 including 1,800 children under five) of Koh Kong province, which has a population estimated at 135,000. Data collected demonstrated that the number of children treated increased with program development. The number of children treated by VHSG substantially increased after a) the training of health facility staff in CBCM including approaches to supporting VHSG and b) the introduction of a new approach to mobilizing and educating communities. During the period extending from March until August 5th, VHSG treated a total of 2465 children most of them presenting with multiple symptoms. Table 1 shows that the number of these cases grew an amazing 276% from between April and December 2008 to June and July 2009--from an average of 81 cases per month to 305.

Table 3
Evolution of the number of cases treated by VHSG
April 2008 to July 2009

Period	*Total*	*Monthly Average for all*	*Monthly cases/VHSG*
April 08 – December 08	735	81	1.8
January 09 Training of health centers staff in supervision			
January 09 – May 09	1077	215	4.7
June 09 Introduction of new approach to community mobilization			
June 09 – July 09	611	305	6.6

Graph 1 shows the distribution of cases of Pneumonia and Diarrheal Disease treated by the health facilities and the VHSG. The graph demonstrates an increase in use of the VHSG overtime. Furthermore, the combined number of cases seen by primary health facilities and VHSG surpassed the number of cases seen by health facilities alone during the same months in the previous year. This increase suggests that VHSG were seeing new cases. The significance of the VHSG contribution becomes more apparent after December 2008 in that VHSG covered only 12% of Koh Kong population but treated nearly as many cases as all the health facilities combined.

Based on information collected through focus groups and interviews, it was determined that the increase in utilization was due to several factors. First, community mobilization carried out by the VHSG through BCC activities. Secondly, volunteers reported that their credibility increased over time as a result of additional training and supervision visits by health facility staff. Lastly was the improved drug management system. Early in the program mothers complained that when they visited the VHSG drugs were not always available. Assuring the availability of needed medication further increased the credibility of the volunteer.



In addition to measuring use, the quality of care was assessed by interview and direct observation of VHSG managing sick children during organized sessions. By May 2009, under direct observation of case management more than 80% of VHSG could correctly classify diseases as shown in the table below. At that time, the main points to be improved were the systematic checking of all 8 danger signs which was low at 8% and 52% for more than 4 and counseling for home based care at 50%. Actions were taken to address the areas of low performance including monthly meetings to reinforce and monitor. At the end of three months all quality indicators had risen to above 90%. Correct treatment of illness was also evaluated throughout the pilot project. Table 4 demonstrates that over the course of the program proper treatment and counseling rose to over 95%.

Table 4
Proportion of VHSGs Correctly Classifying Cases under Direct Observation May 2009

Classification	*Cough/cold*		*Pneumonia*		*Diarrhea*	
	Freq.	%	Freq.	%	Freq.	%
Correct	16	84	13	87	7	88
Incorrect	3	16	2	13	1	13
Total	19	100	15	100	8	100

Table 5
Treatment and Counseling Provided by VHSG to Sick Children June – August 2009

Treatment Provided	*June*	*July*	*August*
Correct cotrimoxazole (dosage) for pneumonia	6/6 (100%)	5/5 (100%)	9/9 (100%)
Correct ORS and Zinc (dosage) for diarrhea	4/5 (80%)	14/14 (100%)	19/20 (95%)
Correct paracetmol (dosage) for fever	18/20 (90%)	8/8 (100%)	15/15 (100%)
Correct counseling for home care	15/19 (79%)	25/34 (74%)	35/36 (98%)

A Final Dissemination Workshop to present the results of the CBCM pilot in Koh Kong was held on August 20-22, 2009. Participants took part in a one-day field visit to some of the project sites, and were asked to provide group feedback upon their return. On the whole, participants were impressed with the visit, acknowledging the need for health outreach to villagers in those remote areas. Recommendations that emerged focused on the need for increased awareness, improved sanitation and hygiene, strengthened referral system, incentives for the VHSGs, improved service delivery, and plans for scale-up and sustainability.

The Koh Kong pilot demonstrated that PHD and ODs can introduce and support CBCM with assistance from the central-level MOH. The use of VHSGs can increase the number of children accessing proven life-saving interventions such as treatment of pneumonia with antibiotics and DD with ORT and zinc. They can provide quality treatment for uncomplicated cases and refer severe cases to health facilities. Additionally, the Koh Kong pilot brought CBCM to the forefront of child health discussions and agendas, and provided first-hand exposure to CBCM to many PHD and OD staff during the Final Dissemination Workshop. In addition to the Final Dissemination Workshop, BASICS created an advocacy report which outlines the background, experiences, lessons learned and next steps for use by USAID and partners in order to promote the expansion of CBCM in Cambodia.