Family Planning Service Expansion
and Technical Support (SEATS II) Project

Strengthening Reproductive Health Service Delivery In Cambodia

By Janne C. Hicks, M.P.H.,
and Priya E. Mammen

January 2000

The goal of the Family Planning Service Expansion and Technical Support (SEATS II) Project is to expand the development of, access to, and use of high-quality, sustainable family planning and reproductive health services in currently underserved populations. It built and followed on the SEATS I Project (1990–1995).

John Snow, Inc. (JSI), an international public health management consulting firm, headed a group of organizations implementing the SEATS II Project. These included the American College of Nurse-Midwives (ACNM), American Manufacturers' Export Group, AVSC International, Initiatives, Inc., the Program for Appropriate Technology in Health (PATH), Social Sector Development Strategies (SSDS), World Education, and United States Agency for International Development (USAID) Missions and other partner organizations in each country where SEATS was active.

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Acronym List

ACNM	American College of Nurse-Midwives
ANC	Antenatal care
AVSC	AVSC International
BASICS	Basic Support for Institutionalizing Child Survival Project
CBD	Community-based distribution
CEDPA	Center for Development and Population Activities
CEP	Continuing education program
CQI	Continuous quality improvement
CMA	Cambodian Midwives Association
CMS	Central Medical Store
CPR	Contraceptive prevalence rate
CYP	Couple-years of protection
EDB	Essential Drugs Bureau
EU	European Union
FEFO	First expired, first out
FIFO	First in, first out
FP	Family planning
FPIA	Family Planning International Assistance
FPLM	Family Planning and Logistics Management Project
HDT	Health Development Team
HIV/AIDS	Human immunodeficiency virus/Acquired immune deficiency syndrome

IEC	Information, education, communication
IPPF	International Planned Parenthood Federation
IUD	Intrauterine device
IWDA	International Women's Development Agency
JSI	John Snow, Inc.
KfW	Kreditanstalt fur Wiederaufbau (German Bank for Reconstruction)
KAP	Knowledge, attitude, and practice
LMIS	Logistics Management Information System
LSO	Logistics support officer
LSS	Life-saving skills
MAQ	Maximizing Access and Quality
MCH	Maternal and child health
MIS	Management information system
MOH	Ministry of Health
NGO	Nongovernmental organizations
NMCHC	National Maternal and Child Health Center
NRHP	National Reproductive Health Program
OD	Operational district
PATH	Program for Appropriate Technology in Health
PGE	Peer group educator
RACHA	Reproductive and Child Health Alliance
RCG	Royal Government of Cambodia
RHAC	Reproductive Health Association of Cambodia
RTI	Reproductive tract infection

SEATS	Family Planning Service Expansion and Technical Support Project
SSDS	Social Sectors for Development Strategies, Inc.
STD	Sexually transmitted disease
TBA	Traditional birth attendant
TOT	Training of trainers
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
VSC	Voluntary surgical contraception
VSO	Volunteer Services Overseas
VSS	Voluntary sterilization services
WEI	World Education, Inc.

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- AVSC International (AVSC)
- The American College of Nurse-Midwives (ACNM)
- The Program for Appropriate Technology in Health (PATH)
- Social Sectors for Development Strategies, Inc. (SSDS)
- World Education, Inc. (WEI)

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Above all, our deepest thanks to the men, women, and children of Cambodia who have withstood so much, yet continue to improve their country through commitment, courage, and simple human kindness.

Preface

Cambodia's ongoing political instability has made the country a challenging environment for public health initiatives. Given the urgent needs and priorities civil conflict has raised, Cambodians have been unable to invest in the long-term development of their country. As a result, they are dependent on foreign aid, especially in the health sector.

This paper highlights the efforts and accomplishments of the USAID-supported Family Planning Service Expansion and Technical Support Project (SEATS) and three projects it has supported in Cambodia: two indigenous organizations, the Reproductive Health Association of Cambodia (RHAC) and the Cambodian Midwives Association (CMA), and a technical support project, the Reproductive and Child Health Alliance (RACHA).

The paper begins by introducing Cambodia's challenges and efforts in health-sector reform. The next chapters explore five technical interventions SEATS and its partner organizations have undertaken to improve access to and quality of sustainable family planning (FP) and reproductive health service delivery programs in Cambodia. These interventions include safe motherhood, service expansion and outreach, logistics management, quality improvement, and organizational development. The final chapter summarizes the experiences of, and lessons learned by, the country's leading health-sector organizations.

RACHA 1999

It is our sincere hope that readers of this document will come away with a sense of the hard work and dedication of SEATS' partner organizations, the obstacles they have overcome to achieve significant improvements in Cambodia, and the insights gained in program implementation. We trust the information will be useful in guiding the development and implementation of future family planning and reproductive health programs for the Cambodian people.

Figure 1. Map of Cambodia

Introduction

Cambodia is an agricultural country that lies between Thailand, Laos, and Vietnam. Its population is comprised predominantly (90 percent) of ethnic Khmer. For the past three decades, Cambodia has been torn by civil conflict including the infamous genocidal rule of the Khmer Rouge from 1975 to 1979. The country emerged from the conflict with its basic infrastructure shattered and its human resource base decimated. Over the next decade, efforts were made to reconstruct Cambodia's health care system. Yet activities were constrained by ongoing civil war and insecurity, as well as international isolation and a lack of resources (Ministry of Health, 1999). It was not until the Paris Peace Accords in 1991 and the first democratic elections in 1993 that Cambodians finally reclaimed their country and began rebuilding and recovering from the devastating effects of their war-torn past.

Cambodia's history of unrest has made it very difficult for the government to provide quality reproductive health services. As a result, the country has yielded some of the lowest health outcomes in southeast Asia (see Figure 2). Access to health facilities is a major problem. The physical infrastructure of the country is still in dire need of repair, and the public health system has suffered deeply, particularly at the district level and below —leaving the primary health care delivery system virtually nonfunctional. Quality of care is very low. The demographic disasters and reduction of the educated class have adversely influenced the quality of education and left a poorly skilled workforce and undertrained professional corps. These factors, along with the very low salaries paid in the public sector, are the root of many problems in the health system.

Figure 2. Health and Population

Population	11.4 million
Growth rate	2.4%
Urban population	15.7%
Infant mortality rate	89/1,000
Child mortality rate	115/1,000
Maternal mortality rate	473/100,000
Current use of a modern method	17.2 %
Number of HIV- positive persons	180,000

In 1995, only 7 percent of married women used a modern method of contraception. However, the findings of a knowledge, attitude, and practice (KAP) survey in 1996 indicated a very high unmet need for birth-spacing[1] services. Only 36 percent of married women could spontaneously name a modern contraceptive method, 53 percent

[1] "Birth spacing" is the Cambodian term for family planning and will be used throughout this paper.

wanted no more children, and 35 percent wanted to delay their next birth by two to three years (USAID, 1996). The 1998 National Health Survey shows encouraging improvements. The spontaneous knowledge of family planning has doubled to 71.7 percent, and use of modern methods has increased to 17.2 percent. The survey also found that:

- For the majority (54.5 percent) of live births in the last five years, the mother received no antenatal care.
- Only a third of births in the last five years were attended by a medical person; the overwhelming majority were attended by traditional birth attendants (TBAs).
- Ninety percent of Cambodian births occur at home or in other nonmedical facilities.
- Neonatal mortality is high (31 per 1,000), but postneonatal mortality (between the first month and the first birthday) is much higher than expected (54 per 1000), and it accounts for 60 percent of infant mortality.
- Although breastfeeding is nearly universal, its onset in Cambodia is typically delayed. Virtually no infants start breastfeeding within an hour of birth, and half do not begin even within the first day.
- Among infants aged 0-3 months, only 15.6 percent are exclusively breastfed.

Many of the findings of the National Health Survey are confirmed through a health facilities survey RACHA conducted in 1998. This survey of 114 health facilities in the provinces of Siem Reap, Kampot, and Pursat was initiated to gain a comprehensive picture of the equipment, supplies, and general service delivery conditions of public health facilities. Findings highlight many of the problems the Ministry of Health (MOH) faces in its efforts to increase access and provide quality reproductive health services:[2]

- Seventy-five percent provided nonpermanent birth-spacing services (pill, condom, and injectables). However, only 10 percent performed IUD insertion. No clinics offered Norplant® implants.

[2] RACHA Studies Number 3: Health Facilities Survey 1998, June 1999, p. 1.

- Services were available five days per week at most facilities in the three provinces but normally only for a few hours each day. In Pursat, village-level maternal and child health (MCH) services were available only two to three days per week and for birth spacing, just one day per week.
- Facilities were grossly underutilized. On average, only 22 clients per month sought antenatal care, and only 36 clients sought care for birth spacing.
- Although 86 percent of facilities reported providing antenatal care, only 59 percent had a fetoscope, and only 55 percent had a vaginal speculum.

Health-Sector Reform

In 1996, the MOH began implementing a new health coverage plan to restructure and improve facilities, services, and utilization of the public health care system. The overall goal of the plan is to improve and extend primary care through implementing a district-based health system and to integrate services at the periphery of the system (MOH, 1995). Since this level is in closest contact with the population, it is essential to ensure access, ensure delivery of good-quality care, and encourage community involvement.

The MOH decided to divide the country into 73 operational districts (ODs), established on a geographic and population basis. Within each OD, a network of static health centers, serving catchment areas of 10,000, would be developed to provide a priority package of preventative and basic curative services. Management structures would be created at the district level to oversee health center activities as well as operate a referral hospital.

The Royal Cambodian Government (RCG) has identified assistance to the health sector as one of its highest priorities. MCH is considered the most critical area. Although the concept of reproductive health is relatively new to Cambodia, the government supports these issues. Since 1993, the government has developed a number of policies, strategies, and action plans for sexual and reproductive health and has incorporated these into the Department of Maternal and Child Health.

The health centers are to deliver a Minimum Package of Activities, which include:

- Primary curative consultation
- Care for pregnant women—antenatal and postnatal consultations, tetanus vaccinations, and prevention of anemia
- Responsibility for deliveries and referral of complicated cases to the next level
- Birth spacing
- Integration of health education into all activities

Objectives of the 1996–2000 National MCH Program Plan include:

- Increase contraceptive prevalence rate (CPR) from 7 percent to 20 percent
- Establish essential obstetric services in all operational health centers and referral hospitals
- Increase coverage of antenatal care (ANC) services (two visits) from 40 to 50 percent
- Maintain breastfeeding rates at 90 percent
- Achieve uniform treatment of sexually transmitted diseases according to national policy

Despite the political turmoil and instability of 1997 and potentially violent elections of 1998, the RCG adhered to this plan and maintained support of the reform efforts. The government adopted a multisectoral approach to increase awareness of reproductive health issues. It considers private-sector nongovernmental organizations (NGOs) and the donor community as partners in reaching its national objectives. Relevant Ministries coordinate efforts, especially for human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS), to make information more widely available. The Ministry of Education, Youth and Sports, assisted by bilateral and multilateral agencies, is in the process of introducing reproductive health components into school curricula. The RCG also identified the need for a community approach and community involvement to ensure better access to maternal and child health care in rural areas (Chivorn, 1998).

USAID Involvement in Cambodia

USAID has provided technical assistance to Cambodia for maternal and child health since 1991. In the mid '90s, the Agency revised its country strategy to support the RCG's health reform efforts. Since early 1996, it has focused on strengthening the role of the public sector for MCH, enhancing the human resource capacity, and expanding access to birth spacing services to improve maternal and child health in Cambodia. To achieve results, USAID supports the following technical areas:

- Birth spacing, including hormonal methods, intrauterine devices (IUDs), condoms, and voluntary surgical contraception (VSC);
- Sexually transmitted disease (STD)/HIV prevention and STD diagnosis and treatment;
- Safe motherhood, including antenatal, delivery, and postpartum and newborn care;
- Childhood diarrheal disease and acute respiratory infections; and
- Micronutrient deficiencies.

SEATS II: 1995–2000

Purpose:

To expand the development of, access to, and use of high-quality family planning and reproductive health services in currently underserved populations, and to ensure that unmet demand for these services is addressed through the provision of appropriate financial, technical, and human resources.

Partners:

- American College of Nurse-Midwives
- AVSC International
- Social Sectors for Development Strategies, Inc.
- Program for Appropriate Technology in Health
- World Education, Inc.

Philosophy and Approach:

Community and client orientation: Expectations and level of satisfaction are placed in a central position along with standards or other program protocols and guidelines ensuring informed choice and contributing to overall client satisfaction.

Policy development: National policies, guidelines, and standards play an important role in expanding access and improving quality. SEATS works with national and local governments, NGOs, and professional associations to ensure that appropriate and effective family planning and reproductive health policies are in place and implemented consistently and well.

Service expansion: Uses traditional approaches such as clinics, community-based distribution, and new strategies such as targeting youth.

Logistics management: Ensures the availability of commodities, a fundamental part of successful family planning programs.

Strategic, data-based programming: Promotes effective data use for better program management and implementation through all levels of operation.

Sustainable programming: Ensures the capacity of an implementing partner to provide quality reproductive health services at a steady or growing level to underserved populations while decreasing dependence on external aid.

The Cambodia Mission identified SEATS II along with other groups to implement USAID's strategy and reproductive health initiatives. SEATS was an ideal choice for meeting the challenges in Cambodia because of its multidisciplinary approach and seasoned ability to respond to a variety of technical needs. Its focus on expanding service delivery through client and community orientation, building technical and institutional competence for sustainability, and negotiating policy development was crucial to successfully implementing the objectives of the Cambodia program.

SEATS Cambodia Country Program

The SEATS Project was active in Cambodia for three years beginning in 1996. It supported two indigenous organizations, RHAC and CMA, and participated as a consortium member of RACHA, a USAID technical support project, with a total obligation of $5,959,000. Through these projects, SEATS concentrated on service delivery, safe motherhood, midwifery skill upgrading, logistics management, and organizational development. With this multifaceted approach, SEATS could address needs at all levels of the health system, from the private to the public sectors, effectively confronting the issues of access to and quality of reproductive health services throughout Cambodia.

Reproductive and Child Health Alliance

SEATS began its involvement in Cambodia in 1996 when it joined RACHA as a consortium member. This alliance was developed in response to USAID's MCH strategy to form a collaborative effort among SEATS, AVSC International, and the Basic Support for Institutionalizing Child Survival (BASICS) Project.[3] As a part of this strategy, RACHA's technical focus areas are safe motherhood, birth spacing, and control of diarrheal disease/acute respiratory infection. RACHA works with the private and public sectors in three focus provinces covering a population of approximately 1.7 million people, as well as at the national level. The organization is staffed by five expatriate advisors including a Program Manager, and approximately 50 Cambodian employees

Reproductive and Child Health Alliance

Date: October 1996–December 1999

Objectives:

- To provide leadership for quality maternal and child health programs assumed by the public-sector
- To improve service delivery in the public and private sectors
- To improve reproductive and child health commodity accessibility and rational management

SEATS Support:

- Full-time Logistics Management Advisor
- Full-time Reproductive Health Advisor
- Short-term technical assistance

Partners:

- ACNM
- JSI's Family Planning and Logistics Management Project (FPLM)

RACHA

[3]BASICS was an active participant in RACHA until December 1998 when the pending closing of BASICS and USAID Mission funding cutbacks led to a reorganization of project priorities and withdrawal of BASICS from the consortium. Some activities BASICS initiated were continued through a JSI/Maternal and Child Health Technical Assistance Support Contract.

located in Phnom Penh and the three regional offices of Pursat, Siem Reap, and Kampot (see Figure 1, Map of Cambodia). SEATS' mandate is to provide long and short-term technical assistance and limited equipment for safe motherhood, birth spacing, and logistics management.

Reproductive Health Association of Cambodia

RHAC was initiated in 1994 as the Family Health and Spacing Project implemented by Family Planning International Assistance (FPIA). It was officially founded as an independent local NGO in April 1996. At the request of the USAID Mission, SEATS began assisting RHAC in 1997. SEATS supports the primary objectives and focus areas of RHAC: organizational development, including strategic and financial planning systems; contraceptive supply (logistics); clinical service delivery; community-based distribution of contraceptives; and training in clinical skills.

RHAC offers reproductive health services through five clinics: two in Phnom Penh, one in Sihanoukville, one in Battambang, and one in Kampong Chaam. A community-based outreach program consists of approximately 400 Health Development Team (HDT) workers in six project sites, and over 230 peer group educators (PGEs) in three project sites. RHAC's mission is to assist the Cambodian people and to improve the quality of their lives by providing model services; information, education, and communication (IEC); and trained health providers. In its clinics, RHAC offers birth spacing (both long- and short-term methods), a range of gynecological services, antenatal care, diagnosis and treatment of STDs, and consultation and counseling on STDs and HIV/AIDS. It was the

Reproductive Health Association of Cambodia

Date:

March 1997–March 1999; Long- and short-term technical assistance through December 1999.

Objectives:

- To increase use of and access to high-quality reproductive health services through strategic expansion of service delivery
- To increase RHAC's capacity to plan strategically, implement, and monitor high-quality reproductive health services in the private sector
- To strengthen RHAC's financial planning and budgeting capabilities, increase the level of cost recovery and income generation in RHAC programs, and diversify RHAC's donor support

SEATS Support:

- Full-time Institutional Development Advisor
- Half-time Clinical Advisor
- Short-term technical assistance
- Core operating funds

Partners:

- SSDS

first organization in Cambodia to offer Norplant® implants. Also, RHAC began the first comprehensive reproductive health program for youth in Cambodia. It is a completely indigenous organization, managed and staffed by approximately 90 Cambodians. In 1998, the clinics received a total of 42,400 visits and performed 27,800 laboratory tests. Through its clinics and network of HDT workers, RHAC served 21,400 new birth–spacing clients in 1998.

Cambodia Midwives Association

Professional association of 2,300 midwives

Date:

July 1997–December 1999

Objectives:

- To strengthen and expand the knowledge of CMA member midwives in selected safe motherhood and birth-spacing topics
- To increase the capability of CMA by helping it to revise its organizational structure, improve its management and leadership skills, and institutionalize a sustainability plan

SEATS Support:

- Part-time RACHA Reproductive Health Advisor
- Part-time RHAC Institutional Development Advisor
- Short-term technical assistance
- Core operating funds

Partners:

- SSDS
- RACHA

Cambodian Midwives Association

The SEATS–CMA partnership began in July 1997, focusing on training and educational needs. CMA is a crucial partner in any effort to strengthen and improve private-sector MCH services in Cambodia, as it supports rural midwives who are the primary care providers for a vast majority of women. By working with the largest unifying body of midwives, SEATS increased the breadth and depth of its services to the cadre of health care providers in Cambodia.

CMA is a private, nonprofit professional organization operating nationwide. Founded in 1994, it was the first registered private health association in Cambodia. A volunteer Executive Committee provides oversight of CMA, and five paid staff members are responsible for program and administrative operations. CMA now has 20 branches and 2,300 members, approximately two-thirds of all midwives in Cambodia. For its membership, CMA currently conducts a continuing education program (CEP) for midwives on "Management of the Third Stage of Labor and Postpartum Hemorrhage." The program emphasizes increasing knowledge and problem-solving skills.

Major Achievements and Results

Across the three projects, five key interventions were conducted to improve quality and access in family planning and reproductive health in the Cambodian health sector:

- Safe motherhood, to improve maternal mortality and child survival outcomes through policy development, the institution of national protocols, midwifery training, and research;

- Service expansion, to address the unmet need for reproductive health and birth-spacing services through clinical services, outreach, IEC, and training;
- Logistics management, to improve commodity accessibility and rational management through policy, systems development, and training;
- Quality improvement, through developing and implementing continuous quality improvement (CQI) systems to strengthen clinic operations and increase access; and
- Organizational development, including human resource development, to improve the sustainability of local organizations and enhance their ability to assist the MOH in achieving its MCH objectives.

While much remains to be done, positive outcomes were achieved in each intervention. Major accomplishments are described below.

Safe Motherhood

- ***National policy and protocols -*** A national safe motherhood policy and strategy was developed and approved. National safe motherhood protocols were developed and are currently being pilot-tested in three provinces.
- ***Life-saving skills training -*** Through SEATS-supported activities with RACHA, six trainers and 30 midwives from referral hospitals, health centers, and private organizations successfully completed competency-based training in life-saving skills (LSS) in 1999. All showed improvement in knowledge, from an average score of 42.8 percent on the pretest to 85 percent on the post-test. Clinical competence also improved through mandatory compliance with proper protocols determined through observation and completion of competency-based checklists.
- ***Improved birth outcomes -*** An analysis of statistics from Battambang Referral Hospital (where all LSS training took place) shows a 10 percent increase in the number of normal births in 1999 compared to 1998. This can be partially attributed to a 5 percent decrease in use of vacuum extraction (15.5 percent in 1998 to 10.5 percent in 1999) and an increase in the number of breech presentations successfully delivered. From January to September 1998, 36 percent of breech presentations ended in death compared with 7.6 percent for the same period in 1999.

- ***Decreased delivery complications -*** Trends indicate that the LSS training initiative is saving lives by decreasing hemorrhage and other complications during delivery. Quality of care among the midwives is increasing, and their services are in greater demand.

- ***Improved test scores -*** As an immediate result of the CMA CEP, "Management of the Third Stage of Labor and Postpartum Hemorrhage," participants gained significant knowledge, as reflected in their test scores. The average post test scores were high, with trainees recognizing on average the correct responses to 10 or 11 questions out of 12. Low scores rose substantially from pretest to post-test with a percentage increase in average scores of 93 percent.

- ***Knowledge retention -*** One year after training, the midwives still retained much of their knowledge, with scores 58–66 percent above pretest levels.

Service Expansion and Outreach

- ***More clientele -*** RHAC has addressed contraceptive supply, outreach, quality improvement, training, IEC, and organizational development through the SEATS subproject. Through interventions in these areas, RHAC served 21,400 new birth–spacing clients in 1998. A total of 102,700 clients came to RHAC for reproductive health services during 1998, up from 87,500 in 1997. RHAC's couple years of protection (CYP) has also increased from 26,800 in 1997 to 28,500 in 1998.

- ***Increased Norplant® use -*** RHAC introduced Norplant® implants to Cambodia in 1996. New users of Norplant® increased 55 percent from an average of 140 per quarter in 1997 to an average of 217 per quarter in 1998. A one-year follow-up study revealed a continuation rate of 94.6 percent. Client satisfaction was high, with 99.8 percent of continuing users recommending it to others and no less than 80 percent wanting to continue its use for at least five years.

- ***Increased visits -*** In 1996, RHAC recorded 770 antenatal and postnatal care visits. This figure more than doubled in 1997 to 1,630 with a similar increase in 1998 to 2,840 visits. Visits for treatment of reproductive tract infections (RTIs)/STDs have also continually increased from 12,300 in 1996 to 22,160 in 1998.

- ***More male clients -*** The number of male clients increased after the introduction of peer educators through RHAC's Youth Reproductive Heath Initiative. In the third quarter of 1999, 295 male clients received services at RHAC's Phnom Penh II clinic, up from 59 in the first quarter.[4]

Logistics Management

- ***Computerized system -*** RACHA developed a computerized National Logistics Management Information System (LMIS) for the Essential Drugs Bureau (EDB) to improve its monitoring and procurement of drugs and contraceptives.
- ***Procedure manuals -*** Two manuals were developed detailing all procedures needed to implement the MOH health logistics system. As job aids, 2,400 of these manuals were printed and disseminated to all health center and referral hospital staff who manage essential drugs.
- ***Stock-level surveys -*** On behalf of the EDB, RACHA's logistics management team conducted stock-level surveys of contraceptives and some essential drugs in 1998 and 1999. Comparative analysis between the two studies showed overall improvement in logistics management. Contraceptive supply stock-outs decreased from 11 percent to 7 percent, potential stock-outs decreased from 25 percent to 5 percent, and health centers satisfactorily stocked increased from 12 percent to 27 percent.

Quality Improvement

- ***Improved service delivery -*** RHAC's quality improvement system has resulted in improvements in service delivery. Weak areas were identified and appropriate interventions such as refresher training, protocol formulation, and increased supervision were undertaken to improve the quality of service provision. As measured through observation and a series of quantified competency checklists, STD diagnosis and counseling skills increased from 65 to 89 percent, counseling skills on Depo-Provera from 76 to 94 percent, and ANC counseling and education from 75 to 95 percent in the six-month period March to August 1999.

[4]RHAC Quarterly Progress Report to USAID/Cambodia, July-September 1999, pp. 3 and 4.

Organizational Development

- ***Skill building -*** Building technical competence has been a mainstay of the SEATS program in Cambodia. SEATS supported training for over 1,500 Cambodians through RACHA, RHAC, and CMA. A complement of local, regional, and international training programs in such areas as clinic and counseling skills, family planning, safe motherhood, logistics, and management has helped to fill the gap of qualified health practitioners and managers who can provide reproductive health care.

- ***Increased funding -*** SEATS helped partners increase sustainability through leveraging. RHAC diversified its funding base from two donors to eight. It increased the amount of non-USAID funding as a percentage of recurrent costs from 15 percent in 1997 to 45 percent in 1998. It is estimated that in 1999, non-USAID funding will exceed 50 percent of recurrent costs. RHAC has also increased income earned locally from fees and interest by almost 30 percent between 1997 and 1998 and by an additional 10 percent in 1999 (SEATS II, 1999). [5]

- ***Fund-raising event -*** CMA conducted its first local fund-raising event, earning $1,400 after all expenses were paid. The money was used to purchase a vacuum extractor, a blood pressure cuff, delivery materials, and a thermometer for the Rattakiri branch of CMA. While this may seem like a very small amount, in a country where per capita GNP is $300, it is an impressive return for an initial effort.

- ***CMA membership expansion -*** SEATS helped CMA with significant organizational expansion, as it grew from 14 to 22 branches in two years. Approximately 2,300 midwives, or roughly 60 percent of the midwives in Cambodia, were estimated to be members of CMA as of September 1999, up from 1,409 members active in October 1997.

In the next section of this paper, each of the five intervention areas will be discussed in detail. In the final section, lessons learned will be explored for guidance in future program planning and implementation in Cambodia.

[5] For more documentation of RHAC's leveraging success, please refer to the SEATS publication: "The Reproductive Health Association of Cambodia, A Leveraging Success Story: Performance Result Three Leveraging Site Documentation", September 1999.

Safe Motherhood

As SEATS began work in Cambodia in 1996, the MOH and donors had made significant progress developing and implementing programs for birth spacing. Safe motherhood, however, was an area still in dire need of attention. Representatives of international and bilateral organizations and indigenous NGOs reported that the hazards of motherhood in Cambodia were "disastrous." Many organizations were present in Cambodia to assist the MCH efforts, but because no one had a comprehensive picture of the MCH situation, organizations were duplicating efforts, leaving areas unaddressed, and without any basis on which to develop plans. Through its mandate from USAID/Cambodia, SEATS made safe motherhood programming a priority intervention and began activities through RACHA.[6]

RACHA recognized that the following interventions would need to be implemented to improve MCH outcomes in Cambodia:

- Determining the status of the maternal and neonatal health situation and services through special studies and research to plan strategically and make optimal use of resources;
- Developing national policy to guide program development and operations;
- Putting in place protocols to establish norms and standards; and
- Linking training and supervision to protocols.

RACHA worked closely with the MOH, the National Reproductive Health Program (NRHP), and other donors to begin program implementation.

Midwives, trainers, and trainees take a break during a LSS training at Battambang Hospital.

[6]The remainder of this section will refer to RACHA as the implementing agency. However, it was SEATS' technical assistance and funds that supported much of the safe motherhood program at RACHA.

Research and Special Studies

With RACHA's assistance, the MOH conducted a national safe motherhood situation analysis in January 1997. Its purpose was to identify significant needs, resources, unmet needs, and lessons learned from previous work.[7] The analysis looked at:

- Relevant policies;
- Human resource needs, capabilities, capacity, and resources;
- Service delivery at the community, health center, and referral hospital levels;
- Health information systems;
- IEC for safe motherhood; and
- Research on safe motherhood.

Some of the major recommendations and findings from the analysis are summarized below. They confirmed the course of action RACHA and other donors needed to take.

- ***Policy development*** **-** Development of a policy on safe motherhood, abortion, maternal and neonatal death audits, and further development of policies on permanent methods of contraception and health financing, are needed to effectively mobilize and use resources, and to provide a strong foundation for safe motherhood strategies and activities.
- ***Human resource planning*** **-** Little service delivery has been standardized or systematically evaluated. There is a shortage of providers in the rural areas and a general shortage of providers adequately equipped or trained for the tasks required. National protocols and job descriptions as well as an understanding of health workers' motivations are needed to guide training, supervision, evaluation, and planning of human resource allocation.
- ***Expansion of access*** **-** Although safe motherhood services are being delivered through the public and private sectors, unmet needs are still widespread. Strategies need to be developed and implemented to reduce the barriers that currently exist to accessing services. These strategies will require integration across all levels of service provision, as well as within communities.

[7] For more information and findings, please refer to Long, et al. "Safe Motherhood Situation Analysis of Cambodia" 1997. Ministry of Health, National Maternal and Child Health Center, Phnom Penh, Cambodia.

- ***Integration of safe motherhood messages -*** Safe motherhood IEC messages still need to be integrated into the national program.
- ***Expansion of research -*** Although much research has been conducted in MCH, it has focused mostly on geographically or topically narrow areas. Operational research, program evaluation, and community-based KAP studies are needed to provide reliable information on maternal and reproductive health.

PATHWAY Study

To help shape policy and program efforts in MCH, RACHA, in collaboration with the Control of Diarrheal Disease/Acute Respiratory Infections/Cholera Working Group of the National Maternal and Child Health Center (NMCHC), designed a study of infant and child mortality and a parallel study on maternal mortality. Both studies used the "PATHWAY" as a conceptual framework.[8]

The PATHWAY studies investigated:

- Home care practices
- Care-seeking practices
- What providers do and don't do
- What happens between sickness and death
- Diagnosis of the cause of death

Pathway Study Interview, Pursat Province, June 1999

Hicks 1999

[8]The PATHWAY study concept was developed by BASICS to assist in developing and monitoring programs to improve case management of childhood illness.

A case from the maternal mortality study presented below illustrates that in the Cambodian countryside, poverty, illiteracy, and the fight for daily survival can determine whether a mother survives childbirth or whether her child lives or dies.

Case Number 126
Stung Treng, Cambodia

Phan Le was a farmer living in Siem Pang district, Stung Treng Province. She was married at the age of 17, and by the age of 19 she had been pregnant twice. Her first child is dead. This was the second pregnancy; before and during her first pregnancy she had been healthy. When she was nearly full term in her second pregnancy, she went to stay in a house next to the paddy field in a nearby village. She delivered there with the help of her grandmother, who is a TBA.

Around 6:00 a.m., she gave birth to a healthy son. After delivery, the grandmother did not see the placenta expel and she tried to push and press the abdomen to stimulate the placenta to come out. At the same time, she found that Phan Le had severe breathlessness, so she asked the private health worker in the village to give her one injection for "gaining the energy," but still the placenta did not deliver. Then they decided to bring Phan Le home to the village (at that time she did not have vaginal bleeding). She arrived home around 8:00 a.m. Her grandmother invited a young TBA to help, because she was old and could not see clearly.

The other TBA arrived around 9 o'clock. She put on gloves and inserted her hand into the uterus to remove the placenta but could not. She took her hand out, removed the gloves, and threw them away. She washed her hands with soap but didn't rinse it off so her hands would be lubricated and easily inserted. She inserted her hands again into the uterus, and again, removal of the placenta failed.

The TBA stopped trying, and Phan Le became breathless and could not speak. Then the heavy vaginal hemorrhage began to flow without stopping. The village health worker gave her an injection, allowed the blood to continue to flow, and waited for the placenta to expel. Bleeding became heavy, and Phan Le became weaker. Her grandfather and traditional healer continued to give the magic and spitting until 3:00 p.m. The floor was soaked with blood, and Phan Le died eight hours after giving birth.

The results of the maternal mortality survey provided very useful information on the causes of and contributing factors to maternal deaths and mothers' understanding of illness and their responses. The study collected data through 236 verbal autopsy questionnaires administered by a trained obstetrician.[9] It found that:

- Ninety percent of women sought care for the disease that caused their death. In their initial response to illness, the majority of women (60 percent) were cared for at home. Most preferred to go to a health facility at a later stage of their illness, after having tried traditional medicine. Nurses and midwives attended 45 percent of all women who sought care, and doctors attended 25 percent.
- People prefer traditional healers or the private sector because 1) they can get credit and the price is fixed beforehand; hence there are no surprise cost increases as often happens in government-run clinics and hospitals, and 2) governments services have the reputation of being poor quality.
- Twenty percent of all deaths occurred to women who were pregnant or within 42 days postpartum. Sixty percent of these maternal deaths were due to direct obstetric causes, nearly half of those because of hemorrhage.
- Among indirect obstetric deaths, infection was the main cause of death, with seven cases of malaria, two cases of tuberculosis, and one case each of pneumonia and hepatitis. Three pregnant women died because of injury, one committed suicide, one was murdered by her husband, and one was killed in an explosion.
- Only 30 percent of the women who died within 42 days after pregnancy went for ANC.
- Most deliveries and abortions were performed by TBAs or midwives at home, including complicated ones.
- Sixty percent of the maternal deaths never arrived at the hospital, the only type of facility in Cambodia where emergency obstetric care is available.
- There were at least three direct obstetric deaths where inappropriate intrauterine maneuvers by poorly qualified attenders contributed to death.
- Nearly all women observed the traditional practices such as heating by fire postpartum and consuming a diet rich in salt.

[9]For a complete discussion of the methodology, results, and recommendations of the maternal mortality PATHWAY Study, please refer to van der Paal and Ketsana. "Investigation of Deaths Among Women of Reproductive Age in Cambodia." SEATS/RACHA, November 1999.

These findings emphasize the need for TBAs and midwives attending home births to be taught the importance of referral to a health facility with emergency obstetric care. They should also be taught how to improve their skills in assessing and controlling blood loss. Programs such as CMA's continuing education workshops and RACHA's LSS training, discussed below, are helping to meet some of these needs. Creating linkages between trained midwives and community TBAs and traditional healers is now a priority for CMA and RACHA.

Policy Development

To begin to address the needs identified through the situation analysis, a national safe motherhood workshop was conducted in June 1997. Participants from various ministries, NGOs, and international organizations explored the findings from the analysis and developed a framework for a national safe motherhood policy, strategy, and five-year plan of action. In December 1997, with technical assistance and encouragement from RACHA, the NMCHC finalized the national safe motherhood policy for official adoption by the MOH.

Following the workshop, the NMCHC instituted a safe motherhood technical working group to ensure that the plan of action was implemented. Under NMCHC's leadership, establishment of this group served to put the MOH rather than any one agency in the central role of overseeing safe motherhood activities in Cambodia.

Safe Motherhood Clinical Management Protocols

The safe motherhood situation analysis indicated a need for nationally approved protocols clearly outlining standards for the clinical management of common obstetrical and neonatal conditions for workers at each level of the health care system. Such protocols are essential for ensuring high clinical standards, a standardized approach to services, and standardized training of health cadres. RACHA and RHAC were involved from the beginning in developing these guidelines by planning, providing leadership in national workshops to establish the guidelines/protocols, and reviewing and revising the document. The NMCHC is currently piloting these protocols in RACHA's three focus provinces:

- Emergency Obstetric Care Manual for Medical Staff;
- Safe Motherhood Clinical Management Protocols for the Referral Hospital; and
- Safe Motherhood Clinical Management Protocols for the Health Center.[10]

RACHA continues to collaborate closely with the NMCHC to technically review content and assist with pilot-testing. In fact, RACHA used protocol content to develop competency-based checklists for its midwifery upgrade training in LSS as a way to test the protocols' applicability and practicality in the work setting.

Training for Midwives

Although midwives are often a woman's first contact with the health care system, most midwives lack basic midwifery and life-saving skills. The quality of care they provide is low. In Cambodia, it cannot be assumed that quality is a direct function of formal training. Medical training focuses on classroom lectures and rote memorization without the benefit of practical experience. Consequently, it is not uncommon for midwives to complete their formal training without ever delivering a baby. From a community perspective, this means that a woman may be forced to choose between a trained midwife who has delivered only a few babies and a trusted, locally known TBA who has delivered a hundred or more in her career. The choice is not difficult, and often poses a frustration for midwives just beginning their practice (Sturgis, 1999).

SEATS built midwifery capacity by supporting the development and implementation of 1) a continuing education program for CMA and 2) clinical training in basic LSS for the MOH. CMA's continuing education program focused on improving knowledge and problem-solving skills, while the LSS training went a step further, requiring proven clinical competence. For a number of reasons, SEATS and CMA elected not to conduct clinical skills training. CMA wanted a program that could reach a large number of its members but also link with its objective of standardizing and improving midwifery practice. Competency-based training requires service delivery sites with a sufficiently high volume of cases with which to practice. In Cambodia, finding such a clinic is very difficult. The preparation, training, and follow-up for clinical-based training is more time consuming and costly. It was not within CMA's budget, time frame, or organizational capacity at this juncture to implement such a pro-

Breastfeeding is a key component of LSS Training for Midwives. Among infants aged 0-3 months, only 15.6 percent are exclusively breastfed.

RACHA 1999

[10]The *Emergency Obstetric Care Manual* includes problems presenting in pregnancy, problems/emergencies during labor, and postpartum problems. The second two manuals include appropriate information on antenatal care, labor and delivery, postnatal care, and care of the newborn.

gram for a large number of its members. Finally, providing CMA with the ability to develop and implement a quality CEP was seen as a valuable foundation upon which other CEP programs could be developed and eventually, clinic-based training introduced as resources and organizational capacity allowed.

CMA Continuing Education Program

When the SEATS/CMA project was designed, the need for technical training for members emerged as a priority. A continuing education needs assessment was undertaken by distributing surveys to the entire CMA membership. The training topic most heavily requested was labor and delivery. Because the most common cause of maternal mortality in Cambodia is hemorrhage, these topics were combined. With SEATS' assistance, a two-and-a-half-day training module was developed on "Management of the Third Stage of Labor and Postpartum Hemorrhage." To begin standardizing midwifery training, the curriculum and training materials adhered to policies and protocols supported by the MOH.

The goal of these workshops was to increase the knowledge base and problem-solving skills of the membership in a wide variety of work settings, including referral hospitals, district hospitals, NGOs, and health centers. The CEP module covered the following topics:

- Definition of the third stage of labor;
- Separation and expulsion of the placenta;
- How the uterine muscles stop bleeding;
- How to check for placental separation;
- Use of oxytocine in the third stage of labor;
- Management of the third stage of labor;
- The effect of postpartum hemorrhage on a woman and her family; and
- Definition, causes, and management of postpartum hemorrhage.

Through 1998 and 1999, three training of trainers (TOT) courses were held, and a cadre of 33 trainers from nine provinces was established. Eighteen workshops were conducted for 442 CMA member midwives.

An immediate result of the training was that participants gained significant knowledge, as reflected in their test scores. The average post-test scores were high, with trainees recognizing on average the correct responses to 10 or 11 questions out of 12. Low scores rose substantially from pretest to post-test, and a comparison of pretest and post-test results showed a 93 percent increase in average scores.

To further evaluate the CEP, a one-year follow-up assessment was conducted in August 1999. Sixty-five midwife trainees from the first six groups trained were randomly selected for a re-test of their knowledge about key CEP topics and practices. Following the re-test, focus group discussions were held to elicit the trainees' thoughts on use of CEP practices and factors affecting use, the training content and procedures, future training topics, and CMA's assistance to midwives.

CMA's continuing education training on "Management of Third Stage of Labor and Post-partum Hemorrhage" is conducted by Cambodian midwives and training materials are produced locally.

Hicks 1999

The re-test showed a 70 percent increase compared to the pretest but an average decrease of 14 percent overall compared to the post-test. Such findings are promising, as they reflect high levels of knowledge retention after a fairly long time. In the small group discussions, 10–20 percent of participants reported that they were

using the CEP training frequently in their government job and in private practice. However, roughly 50 of the midwives reported that, depending on their work location, they have made limited or no use of the CEP practices in their work. Consequently, there is very little reinforcement of knowledge gained.

The reasons the midwives identified for not making greater use of the CEP training indicate that strong structural barriers in the government work setting prevent more extensive use of CEP practices. These barriers include the following:

- ***Supervisors' unfamiliarity with CEP*** **-** Doctors, medical assistants, and health center directors who supervise the midwives have not had the CEP training, and are therefore unfamiliar with and unaccepting of the practices the CEP teaches. Because of their supervisors' higher position in the work setting, the midwives are unwilling to follow CEP practices that are not approved or supported by their superiors.

Midwives' supervisors have told them that if they use the CEP practices and there are any subsequent problems, they will not support them and the midwife will be totally responsible for the consequences. This is a powerful deterrent to using the CEP training.

- ***Unsupportive policy*** **-** In some provinces, official policy governing management of deliveries does not support these new practices. Although Pursat midwives can use their CEP training because the Pursat Department of Health strongly supports these practices, Kampot midwives reported that they have very limited opportunity to use their training because policy does not support the practices. However, if policy were changed to be supportive, midwives said that they and their co-workers would use these practices.

- ***Restrictions on using new skills*** **-** Opportunities to use the skills taught on postpartum hemorrhage and shock are very limited for those working in hospitals. As a matter of policy, these cases are the responsibility of doctors or medical assistants; even if the midwives are better trained to manage such cases, they may only assist.

- ***Widespread preference for TBAs*** **-** The use of midwives for home deliveries is currently very limited because rural women have greater confidence in the skills of experienced TBAs. Very few women choose to give birth in health centers. Rural women consider midwives to be too expensive and too inexperienced with attending deliveries. Many midwives are indeed young and very inexperienced in comparison with TBAs. This further restricts their use of the CEP training.[11]

[11]The use of and limitations on midwife services are discussed in two other RACHA Studies: Rural Women and Health Center Use, Staff Employment, and Health Seeking Behavior, Study #4, July 1999; and Training, Employment and Activity Level of Cambodia Midwives Association Members, Study #5, July 1999.

In addition to structural impediments, midwives also reported the following factors restrict use:

- ***Lack of experience*** **-** The lack of practice in and use of new CEP procedures, combined with their uncertainty about their mastery of these practices, discouraged some trainees from using the CEP practices more extensively in their work. The lack of experience with the new practices led them to continue following familiar, established practices rather than adopting the new ones.
- ***Working alone*** **-** Several midwives stated that they were reluctant to use the CEP procedures in their private practice because they were working alone. They were afraid that if problems arose, no one would be there to assist them.

Thus, while knowledge has increased and many CMA midwives are using some of the new information, much still needs to be done to ensure the consistent and correct use of new skills. One step toward this was developing and implementing the competency-based training program "Skill Upgrading for Midwives: Basic Life-saving Skills" by RACHA and the MOH.

Midwives practive infant resuscitation on a model. Midwives must prove competency through demonstration of new skills before being certified as trained in LSS.

RACHA 1999

Clinical Training in Basic Life-saving Skills

"The Team has the potential to transform in-service training for practicing midwives in Cambodia."

—Kroeger and Thomas, 1999

Based on MOH priorities, the findings of the safe motherhood situation analysis, and site assessments, RACHA and MOH counterparts identified basic LSS training as the most effective way to meet the needs of midwives and improve service delivery at the referral hospital and health center levels. It would also allow RACHA to field-test a training model that could be sustained and replicated nationwide. For the initial year of implementation, LSS training and midwife selection concentrated on Pursat province, as the site would complement RACHA's community-level interventions. All training took place at Battambang Referral Hospital because it had the administrative capacity, as well as an adequate number of monthly deliveries, to accommodate clinical training.

"Infant deaths have decreased, especially those that are breech. More live, but still, referrals come too late to help many."

—Bunn Chhup, Director, Battambang Referral Hospital

These midwives successfully revive a newborn soon after birth.

RACHA 1999

"Once we finished training, we realized how important these new skills are. Postpartum hemorrhage has decreased, number of vacuum extractions has decreased, and the number of women with pieces of placenta is less because breastfeeding is contracting the uterus sooner and better."

—Ma Setha, LSS Training Manager, June 1999

The TOT phase took place from January to March 1999. It included clinical training and practice, teaching skills, and a mentoring component in which the RACHA team and ACNM consultants worked closely with the trainers during the first basic LSS training course. Six midwives and one doctor from Battambang Referral Hospital (and one midwife from NMCHC) were selected to attend the TOT. They successfully completed the course and went on to conduct five training sessions for 30 midwives from referral hospitals, health centers, CMA, and NGOs. RACHA's experience in training Cambodian midwives is highlighted in Exhibit 1.

While it is still too early to assess the long-term impact of this training, preliminary analysis and anecdotal evidence suggest an improvement in the knowledge and quality of care the trained midwives provide. Pre-test and post-test scores for the TOT and the first four trainings increased from an average of 42.8 percent correct on the pretest to 85 percent on the post-test.

An analysis of Battambang Referral Hospital statistics, comparing the incidence of abnormal and normal births for the period January to September 1998 and January to September 1999, shows a 10 percent improvement in number of normal births between the two years. This can be partially attributed to a 5 percent decrease in use of vacuum extraction (15.5 percent in 1998 to 10.5 percent in 1999) and an increase in the number of breech presentations successfully delivered. From January to September 1998, 36 percent of breech presentations ended in maternal death compared to 7.6 percent for the same period in 1999.

As the trained midwives return enthusiastically to their practices, many report they are teaching friends, other midwives, and/or other staff about the new techniques. Some midwives in private practice have doubled their fees, and clients are willing to pay for higher-quality service.[12] As the benefits of the training are so apparent and momentum builds for use of these techniques, more and more midwives are eager to take the training.

Safe motherhood programming in Cambodia has progressed from sporadic activities to an organized intervention, directed by national policy and guidelines for quality service delivery. RACHA has played an instrumental role in this progression and has instituted the first competency-based LSS training in Cambodia. Lives are being saved, but much more remains to be done with support from international donors, local organizations, and professional associations such as CMA. Strengthening ties between trained midwives and health centers with TBAs and community groups is essential. To this end, RACHA and CMA are actively searching for ways in which LSS midwives can be made more accessible in the areas where they work to increase referrals and quality of care.

[12]Chin Sedtha, RACHA Reproductive Health Advisor; interview on June 21, 1999.

Exhibit 1. Training of Midwives in Life-saving Skills

"Of all the programs and activities I have seen in Battambang this past year, the RACHA midwifery training is the only one that has made a difference..."

Battambang Coordinator on the United Nations Fund Population Activities (UNFPA)/Marie Stopes International, National Reproductive Health Program

The "Skill Upgrading for Midwives: Basic Life-saving Skills" training emphasized priority areas for quality and access: problem-solving skills, client-provider interaction, and technical competence. Basic LSS topics covered included infection prevention, ANC, labor, postpartum care including family planning counseling, infant resuscitation, treatment of postpartum hemorrhage, and working with the community. Problem-solving skills were taught through a four-step Midwifery Problem-Solving Process:[13]

1. **Ask** and **listen** when taking the client's medical history
2. **Look** and **feel** in a physical examination to gather more information about the woman and her baby
3. **Identify problems/needs**
4. **Take appropriate action**

This problem-solving approach incorporates clinical experience with theoretical training. Trainees were divided into small groups and made rounds each day to gain actual clinical experience. Technical competence was assessed in two ways: through knowledge and through use of new skills. Pretests and post-tests measured changes in knowledge, and observation of clinical practice in the hospital maternity and ANC wards was used to assess skill level. Each skill area included a checklist. Midwives used the list as a guide for assessing their own skills, and trainers used it when they evaluated how well the midwife performed. As trainees practiced key skills and demonstrated their competence, the trainer initialed the box indicating the trainees were competent in the given area (see Appendix A for a sample checklist). Trainees who did not demonstrate the necessary skills by the time the course ended stayed on for a few more days until they could perform the necessary tasks.

[13]Beck, et al. *Healthy Mother and Healthy Newborn Care: A Guide for Care Givers*, ACNM, 1998.

This competency-based training was very different from other educational and training experiences of the midwives in Cambodia; the trainees weren't sure what to expect or what would be expected of them. However, they embraced the new techniques and immediately began to grasp their significance. As the ACNM trainers observed during the clinical phase of the TOT:

> *"Participants enthusiastically began incorporating 'new' labor and delivery management techniques into their clinical management. They began encouraging hydration and frequent urination in labor, ambulation, standing and squatting in second stage, controlled management of third stage, uninterrupted contact between mother and baby in the hour right after delivery, and generally, an approach of close support and interaction with their mothers throughout the labor process. Midwife participants as well as staff midwives observing, became convinced that this strategy is worth trying on a more regular basis! Participants were all rapidly up to speed with the partograph and recognized its usefulness as both a record-keeping tool and a guideline for referral"* (Kroeger and Thomas, February 1999).

The second phase of the TOT activity was a one-week teaching skills workshop conducted by the same consultants and the RACHA team. This break between the clinical training and teaching skills allowed the trainees to practice their new clinical skills and become more competent in these new techniques for service delivery. At the start of the TOT in teaching skills, the trainees were asked to share the most successful case or exciting incident that occurred since the last training, as well as one difficult case or barrier to practicing new skills. Most reported great success in practicing the new controlled management of third stage:[14]

- Several reported good outcomes with the focus on providing adequate oral hydration to laboring mothers, noting less maternal exhaustion and greater ease with urination in the early postpartum period. One trainee noted that newborns were in better condition immediately after delivery if their mothers were well-hydrated in labor.
- The trainee who had been most clinically active during the last month noted that early breastfeeding was successful in preventing uterine atony.
- The trainee from the NMCHC reported excellent results using the squat position for second stage. She said she was getting the reputation of the RACHA-trained midwife who should be called for "difficult births"!

[14]Kroeger and Thomas. "Trip Report: Training of Trainers/Teaching Skills and Mentoring the First Implementation of Skill Upgrading for Midwives/Basic LSS for Pursat Province," March 9–April 6, 1999, p. 15.

Service Expansion and Outreach

Expanding the number of providers and service delivery points in Cambodia (with an estimated unmet need of 86 percent) is key to increasing the contraceptive prevalence rate. To accomplish this expansion, the government recognizes the need for public- and private-sector approaches that complement and better fill gaps in reproductive health service delivery. SEATS' activities with RACHA worked primarily to improve the capacity of the public sector, RHAC took the lead in the private sector, and CMA cut across both. Each organization approached service expansion and outreach in a different yet complementary way to increase access, quality, and use. Activities included:

- Expanding clinical services and method mix;
- Improving community-based distribution;
- Targeting special populations, particularly youth; and
- Enhancing IEC and marketing capabilities.

Good counseling skills including the use of IEC materials are in Integral part of RHAC's CQI process.

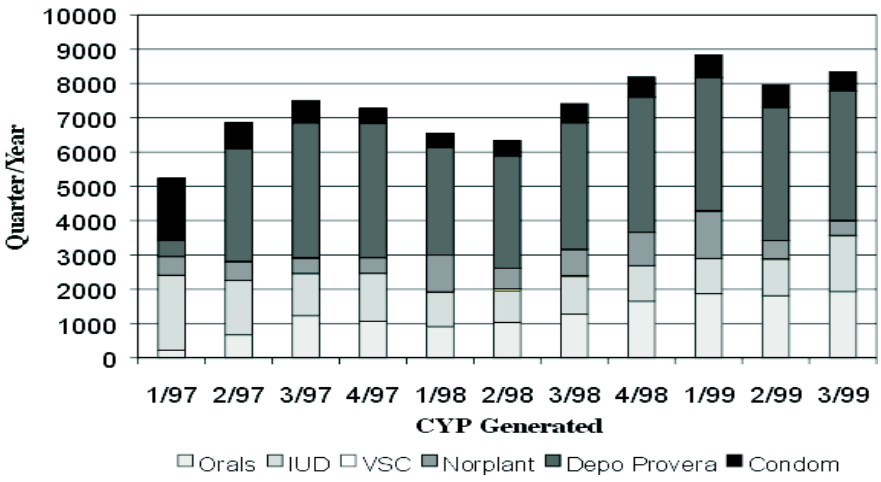
RHAC 1998

RHAC's success provides an excellent illustration of how these components work together to increase birth spacing and reproductive health service delivery. Although RHAC is operating in only six provinces and the municipality of Phnom Penh, it provides commodities equivalent to approximately 30 percent of those provided in the public sector nationally. RHAC served 21,400 new birth-spacing clients in 1998. A total of 102,700 clients came to RHAC for birth-spacing services during 1998, up from 87,500 in 1997. Since SEATS began tracking RHAC's service statistics, RHAC's CYP grew from 5,241 in the first quarter of 1997 to 8,183 in the fourth quarter of 1998 and continued to grow in 1999 (see Figure 3).

"RHAC helps to fill our gaps. NRHP cannot do everything alone."

–Dr. Long, Director, NRHP, July 1999

Figure 3. RHAC CYP by Method



The service delivery interventions highlighted below and in Exhibit 2, Strengthening Community Outreach on page 35, illustrate some of the obstacles and successes of building a sustainable, quality community-based program in a climate of health reform.

Expanding Clinical Services and Method Mix

The SEATS Project has supported RHAC through a time of rapid expansion. During the subproject period, RHAC opened three new clinics: a second clinic in Phnom Penh to help ease some of the client load at Phnom Penh I; one in Battambang, the second largest city in Cambodia; and one in Kampong Chaam. These clinics offer the same range of services as the existing clinics and are clean and well-equipped.

While clients are seen daily at the new clinics, it was realized that more outreach was needed to increase client visits to capacity. Piv Chettena, the lab technician at the Battambang clinic, describes the outreach activities RHAC staff use to increase the number of clients coming to the clinic:

"When the clinic first opened we gave flyers to people in the market areas to advertise. We also distributed posters and small calendars. We produced a radio spot for Battambang clinic but we are still negotiating price and when it will air. We asked UNFPA and other organizations to advertise RHAC services and sent them leaflets so they know about RHAC services. When the clinic is not busy, we go to the villages and give leaflets to the villagers and tell them about our clinic. I know people in the community so I can go with them to give out information. We are beginning to see people come in from the border areas since handing out the leaflets there.

RHAC is the leading private reproductive health service delivery organization in Cambodia. With SEATS support, RHAC developed a new logo and sign board for each of its clinics.

Hicks 1999

It is a difficult problem because people who live far away know about birth spacing but cannot afford to come to the clinic. Sometimes it takes two days for people to get to the clinic. Those that come from far away, we give them extra calendars, leaflets, and maps to carry back and give to others. The villagers are always happy to receive the information. Before they knew very little but now they are happy to be learning more because they have so many children."

Introduction of Norplant® Implants

"It is routine for Cambodians to insert something into the body, but sterilization is considered 'cutting,' which is more worrisome and less popular. Norplant® implants are considered the same as an IUD, just inserted in a different place. An IUD for the arm, and an IUD for the uterus."

–Dr. Ping Chutema, RHAC Associate Director for Clinical Services, July 1999

RHAC recognized the need to provide Cambodian women with a safe long-term birth-spacing method. Thus, with support from the USAID-funded Family Health Services Project, RHAC introduced Norplant® implants in May 1996, becoming the first private, birth-spacing service provider to do so. Through the SEATS subproject, all clinic midwives were trained in Norplant® insertion, removal, and client counseling techniques using a competency-based model. Furthermore, they received ongoing on-the-job reinforcement and periodic supervision from the Medical Advisor and Clinic Director.

Norplant® is very popular among the urban clients at the RHAC clinics. New users of the implants increased 55 percent, from an average of 140 per quarter in 1997 to an average of 217 per quarter in 1998. During the period of SEATS' involvement with RHAC, Norplant® implants accounted for 11 percent of RHAC CYP. Culturally, many factors contributed to the success of the implants in Cambodia. In general, Cambodians like what they perceive to be new and modern. Also, the Khmer translation of Norplant® implants is "IUD for the arm," which is culturally acceptable.

Table 1. Client Satisfaction After One Year of Norplant® Use

	Number	Percentage
Is content with Norplant® implants	486	99.6
Has recommended Norplant® to others	479	98.8
Intends to use Norplant® implants five years or longer	383	80.2

RHAC conducted a one-year Norplant® follow-up study to gauge client satisfaction and technical competence in Norplant® insertion and removal. Follow-up data on the quality of health education, the quality of insertion and removal, the occurrence of side effects and complications, and continuation was obtained for 553 of 969 clients (57.1 percent). Clients were generally older, had more children, and had more abortions than IUD users or other birth-spacing users at RHAC. Clients considered the quality of health education reasonable, and their perception of the quality of insertion and removal by the midwives was excellent. They reported no pregnancies or serious complications. The Year One continuation rate was 94.6 percent. All in all, this new method was readily accepted, and client satisfaction was high (see Table 1, van der den, 1998).

Other Reproductive Health Services

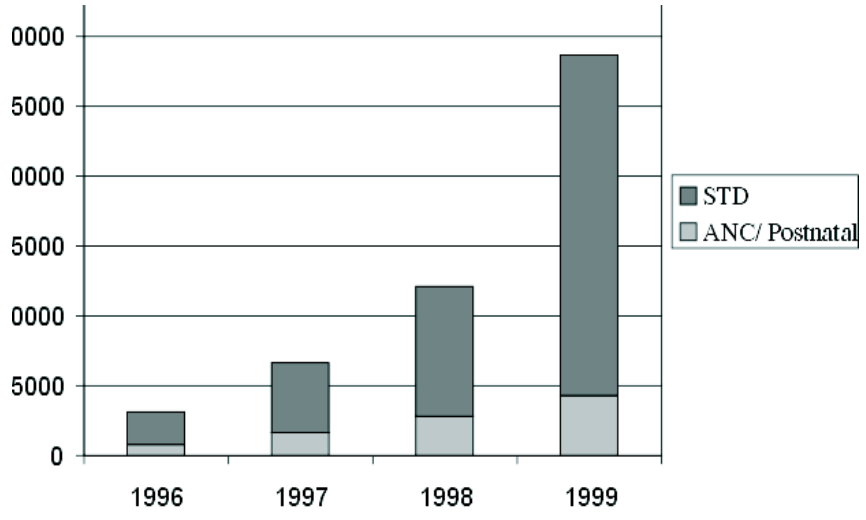
RHAC's service delivery for antenatal and postnatal care has increased dramatically in the past few years and continues to do so. In 1996, RHAC recorded 770 visits for antenatal and postnatal care. This more than doubled in 1997 to 1,630, with a similar increase in 1998 to 2,842 visits. Visits for treatment of RTIs and STDs have also increased, from 12,995 in 1996 to 22,157 in 1998 (see Figure 4).

Mon Sinete, a midwife at RHAC's Battambang clinic, describes a typical ANC visit:

> *"We usually gather all ANC clients together to do an ANC education session. We talk about nutrition, the importance of ANC, physical body changes, hygiene, follow-up care, delivery at the hospital or health center, vaccines, STDs/HIV and pregnancy, and what to do after delivery. Then one by one, we do the exam."*

Treatment of STI/STDs is also a major part of RHAC's reproductive health service delivery. During the second quarter of 1999, RHAC provided refresher training in counseling skills for ANC and STI/STD diagnosis. This training should reinforce the quality service RHAC is providing and continue to increase the number of visits for ANC and STI/STD treatment.

Figure 4. RHAC STD and ANC Visits, 1996—1999



Part of RHAC lab services include syphilis testing for antenatal care clients. While RHAC has provided this service for a number of years, this is a major new initiative for the MOH in which RACHA is now participating as well. In cooperation with the MOH, RACHA began to support piloting of syphilis testing in three referral hospitals. This initiative calls for testing antenatal clients and treating their partners when positive. As of June 1999, 5–10 percent tested positive.[15]

Improving Community-based Distribution

RHAC provides birth-spacing services and other reproductive health information to rural populations through its HDT program. The HDT program is seen as a major approach to meet the needs of the poor and underserved in remote rural areas. The program, which accounted for roughly 88 percent of RHAC birth-spacing clients in 1998, is implemented by 400 RHAC volunteers in six project sites. Through SEATS' support, RHAC expanded its community-based HDT program throughout Takeo province and in Sihanoukville and Battambang municipalities.

Public- and private-sector HDT volunteers are either trained health professionals or village health workers, with the majority (65 percent) in the former category. Currently, HDT workers receive 50 percent of revenues from their sales of contraceptives, and RHAC is exploring other ways to motivate and maintain a qualified cadre of HDT workers.

All volunteers distribute condoms and oral contraceptives and provide counseling and education to their clients. The trained health professionals also offer injectables. Consequently, the village health workers refer clients to the appropriate HDT worker or to the nearest health clinic for services they are not trained to provide. The coordination of the HDT network and clinic services offers clients the full range of birth–spacing methods.

"These volunteer services are particularly critical to improving the health of mothers and families in Cambodia at the present time. We still have a severe shortage of trained human resources, limited means of transportation, poor living conditions, and limited awareness within the general population of measures to protect and promote health.

In order to enhance the quality of services provided by the volunteers, their activities must be linked closely with the Ministry health centers and hospitals and RHAC clinics. They work as information disseminators for these health facilities, which want to provide health information to residents in the surrounding areas. ...The work of the volunteers parallels and supports the safe motherhood strategies which have been determined by the Ministry of Health. Gradually, RHAC, as the partner with the Ministry of Health and other concerned ministries, has strengthened its activities in the communities of different provinces in order to support and enhance the health of mothers and families."

—Vathiny, 1998

[15] Marcel Renier, RACHA Reproductive Health Advisor, interview, June 21, 1999.

"'Selection of CBD workers,' says Phally, 'is the most important part of my job. We want our CBD workers not to be too rich nor too poor.' If the workers, who are primarily women, do not really need the small income they receive from selling contraceptive commodities, they will not be motivated as CBD workers. If they are too poor, they won't manage the money properly. 'They may spend it on food,' says Phally, 'and then there will be no money to re-supply their contraceptive stock. They must be well known and well liked'. Phally and other program coordinators look for CBD workers who have good communication skills and CBD workers who are literate."[16]

HDT volunteers are chosen based on their popularity in the community, regardless of their economic standing. The training regimen of HDT workers consists of a five-day orientation and skill workshop followed by two refresher courses. The training covers contraceptive technology updates, counseling, method side effects, HIV/STDs, communication skills, and record keeping. A subcontract with World Education was developed to strengthen RHAC's training program for HDT workers. The revised course provides HDT workers with additional training in STDs/HIV/AIDS, and in personal communication and community development skills, as these skills are seen as essential for education, promotion, and combating rumors. The improved training helps HDT workers better serve clients, increase their income, and improve their ability to refer clients to RHAC and government clinics.

Good rapport and communication skills are essential to providing quality counseling and health education.

RACHA 1999

[16]Huff-Rousselle. "The Daily Battle of Outreach Workers in Cambodia," IPPF, vol. 5, no. 9, May 1998.

RHAC held an HDT strategic planning workshop from April 21 to 23, 1999, to discuss problems, identify solutions, and develop a long-term strategy for implementing the HDT program. In preparing for the workshop, RHAC staff collected and analyzed statistics from the HDT program and each member of the HDT program. Table 2 illustrates some of the findings.

Table 2. Selected HDT Program Statistics

	1997	1998
Number of HDT workers	370	356
Number birth-spacing visits	71,467	90,732
Number of new clients	22,040	17,025
Number of visits/worker	193	255

RHAC did recruit new HDT volunteers during 1998, including 42 in the new site at Battambang, but absorption of existing HDTs into the MOH system exceeded new recruits. However, it appears that HDT workers were more productive in 1998, as they had 255 visits per worker as compared with 193 visits in 1997.

The analysis also found that women were more effective than men as HDT workers. In condom distribution, they were roughly seven times as productive as men. For pills, they were between two and three times as effective as men. For Depo, they were only about 40 percent more effective than men. The trends for the first three months of 1999 were similar for male versus female HDT members.

A total of 90,732 birth spacing visits were attributed to the HDT program in 1998, of which 17,018 were new acceptors. The method breakdown for clients was 58 percent injectables, 38 percent pills, and 4 percent condoms.[17] The HDT program is the most effective program currently operational in Cambodia in reaching clients with family planning and reproductive health services.

[17] RHAC 1998 Annual Report, p.3.

Exhibit 2. Strengthening Community Outreach

The strategic plan developed in 1997 established the strengthening and expansion of RHAC's network of community-based distribution (CBD) volunteers as RHAC's most critical priority in service delivery. At that time, the CBD program was providing about 70 percent of RHAC's birth-spacing coverage. However, the CBD program was known to be less effective than it could be. RHAC's CBD program is unique, partly because of its evolution as a quasi-public, quasi-private sector program, and partly because of the composition of the network of volunteers, most of whom are trained health professionals. The program has developed in different ways in different areas where RHAC is working. It has continued to change, with some of the changes being externally induced due to health-sector reform and some internally induced.

In 1994, FPIA, the international service division of the Planned Parenthood Federation of America, set up the Family Health and Spacing Project in Cambodia with funding from USAID. The project agreement called for the training of local staff and the transfer of responsibility for the programs to an indigenous organization. In April 1996, RHAC was established as an indigenous NGO. Later in the same year it took over the portfolio of programs that FPIA had implemented, and it became an affiliate member of the International Planned Parenthood Federation (IPPF).

Under the FPIA project, subgrants were given to three MOH provincial health departments to begin clinical and CBD programs: Svay Rieng (January 1995), Takeo (July 1995), and Kompong Speu (March 1996). The FPIA project was heavily involved in developing the program, training CBD workers and health professionals working in clinics, and supervising service delivery. This support continued through 1996, when the FPIA project ended and RHAC became an independent NGO. In 1997, with increasing donor support and health-sector reform underway, the MOH and provincial health departments were ready to assume full responsibility for health center operations. RHAC made plans to train and hand over clinic operations by the end of 1997. In early 1998, after much discussion with Ministry officials about the best way to handle the CBD program in relation to plans for health-sector reform, the CBD programs in these provinces shifted to the private sector and became RHAC's responsibility. RHAC now had the opportunity to complement MOH efforts to strengthen operational districts by expanding CBD programs and increasing access to birth-spacing services.

The challenges of a private-sector organization operating within a context of health reform soon became apparent. When RHAC assumed operation of the CBD program at the beginning of 1998, more than half of trained health professionals were employed by the MOH. As reform progressed throughout 1998 and more health centers were built and became operational, the trained health professional cadre of the CBD network was obliged to devote its time within the fixed public-sector system. RHAC lost many CBD workers. Some health officials saw the CBD programs as competing with the new health centers for clients, denying the health centers the income that could be earned through contraceptive sales, especially Depo-Provera. Services were seen to be duplicative rather than complementary. A supporter of CBD programs from the Ministry of Women's Affairs observed,

"Now you worry more about the health of the health center, rather than the health of the people."

In the fall of 1998, the structure and future of CBD programs in Cambodia were hotly debated by the MOH, NGOs, and donor organizations. Because of concerns over quality of care, the MOH limited CBD workers' distribution of contraceptives to pills and condoms. Depo-Provera was no longer to be distributed through CBD workers. However, RHAC argued that 65 percent of its CBD workers had medical training, received significant training from RHAC, and could provide Depo-Provera safely and with good quality to women in rural areas who requested this method.

As the number of volunteers began to drop and access to services decreased, RHAC re-evaluated its CBD strategy. It thought it should moderate its focus on the clinics and concentrate more on the community-based program because it was reaching a larger number of people who were rural and poorer, and because the individual volunteers were not, on average, very productive. RHAC took the following actions:

1. **Renaming the program**–*To differentiate the RHAC CBD from the more traditional programs that were being launched elsewhere in Cambodia, and to highlight that many of the volunteers were health professionals, the program was renamed the Health Development Team. RHAC's program is unique in that most of the volunteers are trained health professionals who can safely provide Depo-Provera.*

2. **Recruiting HDT volunteers**–*To compensate for the loss of CBD workers as they returned to their work in MOH health centers, RHAC now deliberately recruits HDT volunteers who are trained health care providers but are not employed by the MOH.*

3. **Recruiting HDT volunteers from outside health centers**–*To maximize client access to birth-spacing services and to avoid competing with government health centers for fees generated by the sale of contraceptives, HDT workers are recruited who live away from health centers.*

4. **Developing materials**–*To motivate workers and improve the quality of the education and counseling they provide, IEC flipcharts are under production for their use, and other materials have been provided.*

The motivational tools of the HDT were re-evaluated to keep HDT competitive with other CBD programs. Currently, HDT workers receive 50 percent of revenues from their sales, as well as a per diem to travel to monthly meetings. Yet this return is not seen as enough by workers or managers looking to improve performance. RHAC has begun to introduce nonmonetary incentives, such as recognition in the HDT newsletter or special privileges based on performance and quality of services. For example, in the first quarter of 1999, RHAC announced that CBD workers with the highest number of new birth-spacing clients would be provided with a bicycle.[18] It is hoped that incentives such as these will ensure greater quality of service and continue to increase access.

[18]RHAC received 150 bicycles through a donation from the japanese Organization for International Cooperation for Family Planning.

Reaching Youth

In an effort to meet the growing need for adolescent reproductive health services in Cambodia, RHAC established a pilot adolescent reproductive health project in Sihanoukville in 1997. The pilot tested the applicability in the Cambodian context of training and providing information through peer group educators. Despite cultural barriers to discussing sex with youth, RHAC was able to reach over 2,000 youth with reproductive health information. Building on the experience and success of this project, RHAC received a three-year $700,000 grant from the European Union (EU)/UNFPA to develop and implement a program for addressing youth reproductive health issues through youth counseling centers and in-school and out-of-school peer education. SEATS provided technical assistance in program planning, training in counseling and youth-friendly services, curriculum development, and teaching skills for trainers and educators.

RHAC conducted a baseline survey on sexual and reproductive health knowledge, attitudes, and behavior of Phnom Penh youth. The study determined that youth talk little among themselves about sexuality and reproductive health matters. Topics that were frequently discussed were AIDS, HIV, and use of condoms. These discussions did increase slightly in frequency as youth got older. Despite their apparent reluctance, however, 75 percent of the youth believe it is very good to discuss these topics. Given these findings, RHAC realized that peer education could be difficult, especially with the younger age groups. Thus, the program revised its training of peer educators to focus on methods and techniques of opening discussions and conducting education sessions.

The baseline survey also found that out-of-school youth have many misconceptions about birth spacing. No less than 33.6 percent believe that sex before marriage cannot result in pregnancy, and 30.7 percent believe that sex before the age of 20 cannot result in pregnancy. Education for this group is focusing on these misconceptions.

Through the new program, over 230 PGEs have been trained to provide education and referral for birth spacing, RTI/STDs, and HIV/AIDS. Since the start of the project the PGEs have

- Conducted 143 group education sessions with 3,135 participants;

Ms. Phally, Youth Program Manager: *"At our education sessions, training, and meetings with peer educators, they have many questions about sex. Oh! So many questions about sex."*

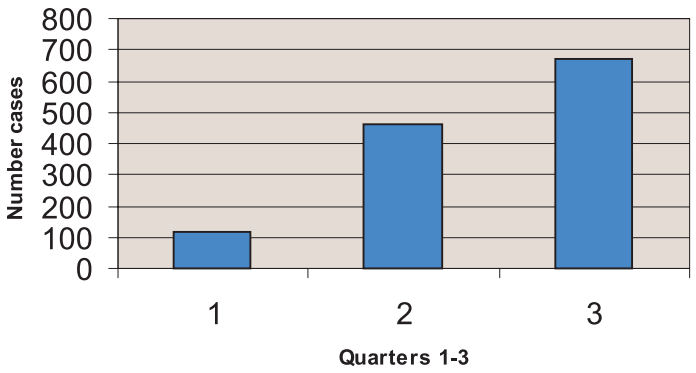
Peer Educator: *"I like being a peer educator because it's so important for our youth to learn about reproductive health."*

Student: *"HIV is a big problem for us."*

Student: *"It is very important we learn about reproductive health."*

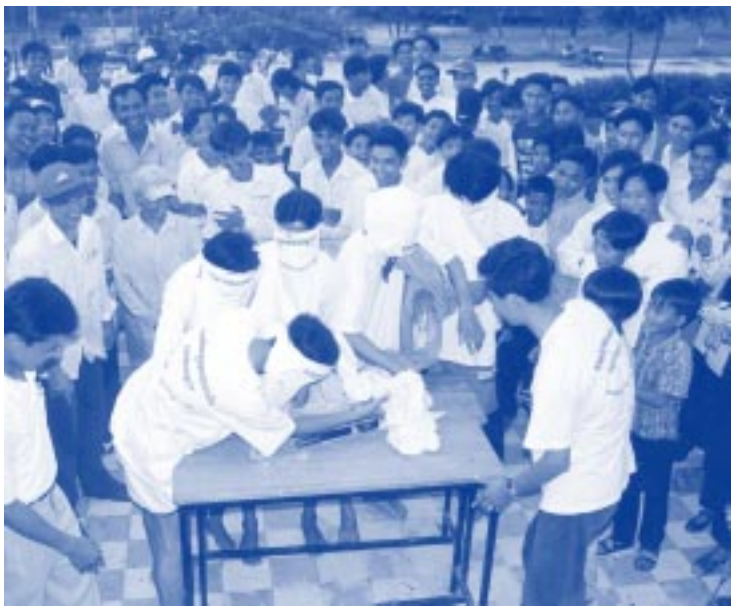
- Conducted 1,262 talks with 5,062 youth; and
- Referred clients--233 referrals arrived in the clinics for services from June to October 1999.

Figure 5. Increase in Male Clients Treated at RHAC Clinics, Quarters 1-3, 1999



To attract youth to the clinics, RHAC established youth libraries and karaoke facilities. In a short six-month period, over 6,350 youth used the libraries. The integration of libraries and karaoke facilities seems to have the potential of gathering young people and facilitating dissemination of reproductive health information.

Results from the PGE efforts were quickly realized. The number of youth clients under 25 is increasing, and in the third quarter of 1999, RHAC served 560 contraceptive clients, identified and treated 904 clients with sexually transmitted diseases, and 2,073 clients with reproductive tract infections.



Games and activities at youth rallies add to the fun and enthusiasm as well as create awareness about RHAC, the work of peer educators, and reproductive health services.

RHAC 1998

The number of youth who came for STD services in the first three quarters of 1999 increased from 543 in quarter one to 893 in quarter three. The number of male clients is also increasing partially due to the peer outreach and the presence of trained male providers who provide quality services (see Figure 5).

Enhancing IEC and Marketing Capabilities

IEC and marketing support service delivery efforts and serve to increase the knowledge and skills of service providers and their clients. Sokonthea, CMA's secretary, provides an excellent example:

"The CMA Newsletter helped one member gain a scholarship to Thailand to study obstetrics. She read the newsletter before going to the interview and was able to answer an important question because of what she had just read. By answering the question correctly she was awarded the scholarship. Scholarships are very hard to get."

The CMA Newsletter is published twice a year; it is hoped it can be published more frequently in the future.

The enthusiasm of young people–waving their hands in the air to the popular music and shouting out answers to quiz questions–generated an energy and a new awareness of reproductive health issues and RHAC. In a country where outreach to youth is just emerging and still faces many obstacles, RHAC is taking a lead. Over 1,000 students received flyers with information on RHAC services and a map to the clinic.

RHAC 1998

RHAC has an IEC Department responsible for marketing and developing materials. Among the key activities undertaken through SEATS support was improvement in marketing voluntary sterilization services (VSS). Through support from AVSC and RACHA, RHAC has an operating theater for surgical contraception and has successfully conducted a small number of sterilizations, but awareness of and demand for this service are low. The ability to provide voluntary sterilization rather than the level of demand for the service was taken into consideration first, resulting in poorly developed promotional materials and minimal use of the services. To correct this situation, RHAC requested technical assistance from PATH, through its subcontract with SEATS, to conduct market research and develop informational materials on surgical contraception. The following materials will soon be in use:

- An informational video and brochure that can be used in the waiting room of RHAC and MOH clinics;
- A video to be shown during counseling sessions with clients;
- An information brochure to be provided during counseling; and
- Leaflets with preoperation and postoperation instructions.

Part of RHAC's strategic plan for IEC includes more focus on market research. To this end, RHAC, with assistance from the Institutional Development Advisor and the UNFPA Research Advisor, conducted research on its clients' socioeconomic status and the price of its pharmaceutical and laboratory services compared to those of its competitors. The Association also conducted a public-/private-sector study to 1) determine the socioeconomic profile of clients who self-selected outpatient reproductive health services in either the major government facility, NMCHC, or RHAC's Phnom Penh I clinic, and 2) compare health-seeking behavior and aspects of service delivery in each setting. Routine information is collected at clinics on how clients found out about services. Most hear about RHAC through friends and family, so the Association's marketing approach continues to emphasize personal communication through clinic staff and HDTs rather than mass media.

Key Accomplishments of RHAC's IEC Department

- New logo developed to improve marketing
- Leaflets on contraceptive methods improved and over 100,000 distributed
- T-shirts, posters, and calendars designed and distributed
- New signs and display cases constructed for each clinic
- Articles about RHAC activities written and published by local newspapers and international journals
- A flipchart for HDT members' use was developed with technical assistance from PATH Thailand

RHAC has played a vital role in increasing availability of birth spacing and reproductive health services to Cambodians. With SEATS' support, it expanded both clinical and community-based services, is reaching underserved populations, and has program activities that strengthen and support service delivery. RHAC has worked closely and cooperatively with the MOH to overcome potential barriers to service delivery and is building a reproductive health program that complements MOH efforts to improve MCH in Cambodia.

Logistics Management

Proper logistics management is essential for the effective and efficient operation of any family planning and reproductive health program. Inventory management is the heart of the supply system, since poor inventory control leads to a waste of scarce financial resources, a shortage or overstocking of essential supplies, and a decrease in the quality of patient care. SEATS' logistics management efforts in Cambodia assisted national- and provincial-level systems, as well as local partner organizations, in improving their logistics operations. Specific logistics management interventions included:

- Developing a National LMIS;
- Training staff in logistics management;
- Strengthening procedures and practices at the central, district, and peripheral levels;
- Conducting stock-level surveys; and
- Improving logistics management procedures at RHAC.

"We had experience with drug management and storage, but nothing was systematically organized. Now there is more order and the system is refined. I am happy that the system is not completely different from what we had before."

–Dr. Chroeng Sokhan, Head of EDB, June 1999

Commodities are loaded from the CMS for delivery to OD stores.

RACHA 1999

RACHA is responsible for all logistics management training within the MOH and for developing systems to help the EDB to better supervise and monitor the supply system. The Alliance seeks to improve MCH commodity accessibility and management, to help operationalize management information systems (MIS) in the four focus provinces, and to help strengthen the MCH management system at the national level. RACHA also negotiated with the MOH to ensure contraceptive supplies for RHAC and helped it to resolve problems with poor-quality commodities.

Developing a National LMIS

From 1991 to 1997, the Central Medical Store (CMS) supplied all service delivery points in Cambodia directly, but with the reform and decentralization, the CMS began supplying 73 ODs throughout Cambodia and will supply 800–900 referral hospitals and health centers when all are operational. In early 1998, the MOH recognized the need for a system that would assist in monitoring and improving supply operations of the EDB. Half of the total annual value of imported pharmaceuticals is provided by the public sector. While there was a means of monitoring commodity supplies within the MOH tiers, it was neither systematic nor streamlined and often caused delays and stock-outs.

Staff from the EDB enter data from inventory reports as part of the new LMIS.

RACHA 1998

RACHA provided technical assistance to the EDB to develop a computerized information system. The system was designed to quantify supplies from the CMS to the OD stores and to track and monitor commodity usage at the peripheral levels. RACHA made changes and improvements to the foundations of the existing EDB system to facilitate learning and integration of new procedures at all levels.

RACHA, with the technical assistance of FPLM, created a computer database program for contraceptives and essential drugs stock monitoring. The EDB uses this computer program on a quarterly basis to process resupply of drugs and contraceptives at the OD level. It was decided that once yearly, information from the peripheral level would also be collected and entered into the system. Both sets of data, from the OD and peripheral levels, are used to produce information for procurement, to monitor stock levels, and to analyze

dispensing patterns at facilities. This information enables the EDB to be more accurate in quantifying the amounts of commodity supplies sent to the OD levels, as well as to track supplies in a more organized manner.

The EDB is considering developing a scaled-down LMIS for OD use to quantify resupply and analyze data from health centers and referral hospitals. ODs would then supply this analysis to the EDB, which would allow central staff to focus on monitoring and reporting.

Training of Operational District Pharmacists

In September and October 1998, RACHA assisted EDB staff in providing a one-week training in logistics and supply management to all OD pharmacists. Seventy-three OD pharmacist received guidance in receipt, handling, storage, requesting, and supplying of commodities, according to the guidelines established by the EDB and the new LMIS. Specifically, participants practiced completing forms, such as the fiche stock card and the request form, to more easily transfer knowledge and use of the new system. The pharmacists were taught that stock should be kept in accordance with the FEFO practice and that all commodities should be kept in a manner reflective of good storage technique (dry, no direct sunlight, etc.) to ensure preservation until expiration. The training served to reinforce the practice of appropriate national norms.

Two months later, 97 percent of OD pharmacists trained were evaluated through observation and interviews. The results of this assessment helped to tailor further training as well as identify the equipment needs of OD storerooms. In general, the evaluation showed that the training had a positive effect on knowledge and practice. The data also highlighted areas of strength, such as storeroom reorganization and accuracy in maintaining fiche stock cards, as well as weaknesses, such as how to calculate for excessively stocked items and issue quantities for new health centers. However, improved knowledge did not always translate to improved practices. The assessment indicated that responses given during interviews sometimes conflicted with observed practice in a particular store. As the logistics support officers (LSOs) have frequent contact with the OD pharmacists, the key to strengthening the areas lies with their supervisory visits to the OD storerooms.

"I received one week of training in Sihanoukville. Before the training I knew nothing about how to arrange the drugs. Now we arrange them by first expired, first out (FEFO) or first in, first out (FIFO) and by different programs, i.e. malaria, TB, leprosy, birth spacing, etc."

–Song Miranda, OD Pharmacist

Storekeepers use FEFO and record stock levels on fiche cards.

RACHA 1999

Training of Provincial Staff In Logistics Management

An intensive round of 58 workshops for three days each in 20 provinces began in August 1999 and will continue through first quarter of 2000. Upon workshop completion, 1,200 staff from the health centers and referral hospitals will be trained.

To begin standardizing operations nationwide, RACHA worked with the MOH to develop a training program in proper logistics management of drugs and other commodities for health centers and referral hospitals. Two manuals were developed, one for health centers dispensers and the other for referral hospital pharmacists. They detailed all procedures needed to implement the MOH health logistics system. As job aids, 2,400 of these manuals were printed and disseminated to staff who manage essential drugs.

Two training manuals, based on the procedure manuals, were also developed. The training manuals used a competency-based approach that gave clear guidance on how to conduct each session. Such a detailed curriculum will help to create standardized training throughout the country. Two TOT workshops were held to ensure that nine trainers, four from RACHA and five from the EBD, could use the procedure and training manuals effectively.

Stock-Level Surveys

When RACHA began work with the EDB, the stock level of essential drugs and contraceptives maintained in health centers, former district hospitals, and referral hospitals was unclear. RACHA assisted the EDB in compiling and publishing results of a stock-level survey in early 1998 to determine the actual number of essential drugs and contraceptives located in these facilities and to determine whether these amounts met the monthly distribution demands. A systematic random sample was selected of approximately 12 percent of the 270 health centers and referral hospitals thought to be operational. A large number of the facilities surveyed were overstocked in oral medications, injectables, and contraceptives, and many were either potentially or completely stocked out of these items. A similar stock-level survey was completed in 1999 to gather the same information and measure any improvement between the two years.

Table 3. Comparison of Stock Status at Former District Hospitals, Health Centers, and Referral Hospitals: 1998 versus 1999

	Oral Medicines			Injectable Medicines			Contraceptives		
	1998	1999	(%) Change	1998	1999	(%) Change	1998	1999	(%) Change
Stocked Out (Nil Stock)	7%	11%	Worsened 4%	16%	8%	Improved 8%	11%	7%	Improved 4%
Potentially Stocked Out	17%	14%	Improved 3%	17%	19%	Worsened 2%	25%	5%	Improved 20%
Satisfactorily Stocked	26%	30%	Improved 4%	20%	41%	Improved 21%	12%	27%	Improved 15%
Overstocked	50%	45%	Improved 5%	47%	32%	Improved 15%	52%	61%	Worsened 9%

Table 3 shows a comparison of stock status at the former district hospitals, health centers, and referral hospitals in 1998 and 1999. In general, the data indicate defiIn

nite improvement in the stock levels for all commodities. While the situation was most improved for injectables (21 percent more facilities were satisfactorily stocked, and 8 percent fewer had no stock), it also improved greatly for contraceptives (Eberle, 1999).

RHAC Contraceptive Supply

During the strategic planning workshop held in late 1996, RHAC identified commodities procurement and logistics management as priorities. As contraceptives were no longer available through USAID or FPIA, RHAC needed to find a consistent and dependable source of commodities, including contraceptives, pharmaceuticals, and medical supplies. With assistance from RACHA, the MOH agreed to supply RHAC with contraceptive commodities from the stock donated [by the German Bank for Reconstruction (KfW)] to the MOH.

This was at once a success and a challenge. RHAC is pleased with this public assistance of its private-sector activities, but the arrangement has not been without problems in the mechanics of the supply system as well as in the quality of commodities received. RHAC feels constantly insecure about its source of contraceptive supplies, partly because of the weaknesses in the MOH supply system, but more importantly, because of the politics at the central and provincial/district levels.

Problems With Quality of Commodities

- Condom distribution by HDT members in Sihanoukville, Svay Rieng, and Kamong Speu has declined considerably due to poor-smelling condoms. HDT members refused to distribute these condoms since their clients refused to use them.
- The IUDs that RHAC recently received lack a ruler inside the package that would enable RHAC staff to adjust the depth of the IUD insertion to the size of the client's uterus.
- The Depo-Provera received in spring 1998 was caked at the bottom of the vial. After long deliberations with the Upjohn Company, it was decided to withdraw two batches from the shelves and replace the unused vials.
- The progesterone-only pills received are a different brand with different packaging, 35 pills per strip as opposed to the 28 pills per strip previously supplied through other sources. These changes are not easily explained to patients and make service provision more difficult and patient compliance less likely.

The mechanics of how the commodities would be handed over to RHAC were the subject of prolonged discussions during the first six months of 1998, and the first supplies were not received until December 1998. RHAC has now received condoms, combined pills, progestin-only pills, IUDs, and Depo-Provera from the MOH. Norplant® is purchased from IPPF.

For Phnom Penh these supplies were obtained from the CMS, but given minor problems with request forms, the supply route was changed to the NMCHC. This works well.

In the provinces, the relevant OD supplies the RHAC programs. For the third-quarter supplies, there were problems in Battambang, Svay Rieng, Kompong Speu, and Takeo over Depo-Provera. The persons responsible for MCH departments in these provinces thought the HDT members were not allowed to inject Depo-Provera. Consequently, no Depo-Provera was released in Svay Rieng and Kompong Speu to the HDT program. This was corrected after discussions with NMCHC, and an emergency request was made and filled.

RACHA has assisted RHAC with most of these problems and has proved a valuable link directly to the MOH system.

RHAC maintains its commodities in accordance with the FEFO practice. All commodities are kept in a manner reflective of good storage technique that ensures preservation, and they are maintained in good condition until expiration. A consultant was hired to provide technical assistance in logistics management, and an Inventory Management Manual was developed. The manual is intended to serve as a working, practical document to assist RHAC staff in the effective inventory control of RHAC's commodities.

The manual documents existing inventory control practices based on the current contractual arrangements with donors and also incorporates several additional modifications to improve inventory management. Two key source documents have been redesigned to improve stock control. The bincard has been altered to include expiration date, batch number, and monthly consumption for a five-year period, and the requisition voucher now states stock on hand. Moreover, the document includes a concise set of indicators for rapidly assessing the pharmaceutical management system.

For the first time since independence, Cambodia has a national LMIS through the efforts of RACHA, other donors, and the commitment of the EBD and MOH. The tools exist to scale up this system as the goals of the MOH reform are realized and the NGO community begins to work within the MOH framework. Furthermore, having created a cadre of pharmacists and Ministry officials who are well-informed on proper logistics management, SEATS has established a strong foundation on which the LMIS and logistics training can flourish and the system can continue to improve.

Quality Improvement

SEATS provides projectwide structures and subproject-specific initiatives aimed at continuous quality improvement. As such, RACHA, RHAC, and CMA all have quality of care components that address skill and infrastructure requirements to provide quality reproductive health care to Cambodians. Some of these interventions were discussed in previous chapters: policy development, use of protocols, and logistics management training. This section will focus on a quality improvement system RHAC developed and implemented to improve the quality of care at its clinics. The process RHAC uses is consistent with the Bruce/Jain framework, the principles of USAID's Maximizing Quality and Access (MAQ) initiative, and appropriate quality improvement techniques and processes.

"We've always provided service delivery but we were never sure exactly how we were doing. It was easy when RHAC was just one clinic but as we expanded it was harder to supervise all the clinics and control quality of care. Thus, we decided to develop and implement some type of system to track our quality of care. We wanted to maintain quality services and keep RHAC's reputation high to attract new clients. We recruited a lot of new staff and needed to make sure they were providing good service."

—Dr. Chutema, RHAC Associate Director for Clinical Services

RHAC's Quality Improvement System

RHAC's CQI system relies on clinic staff to identify problems, develop action plans, and solve those problems at the clinic level. It empowers all staff to promote quality and encourages providers to seek and implement creative solutions to problems arising in the work setting. This self-improvement system is based on biannual supervisory visits from the RHAC's Deputy Director for Clinical Services, who acts as a supervisor (van der Velden, 1998).

RHAC management was initially uneasy and viewed the development and implementation of a CQI system as a major time investment in schedules already overloaded. Further, RHAC recognized that self-assessment is threatening and needs to be carefully guided in Cambodia. For years, speaking out against the government or one's supervisors could mean loss of a job, detention, or death. Understandably, Cambodians are very reluctant to speak

Staff learn to identify problems with service delivery and develop action plans.

RACHA 1999

poorly of anyone in authority, so implementing quality tools that require oral or written feedback, or written testing, can cause great anxiety. Despite these initial concerns, RHAC recognized the need to monitor quality of care and is now committed to the process.

The goals of the RHAC CQI system are to:

- Continuously measure and improve quality of care by focusing on problems that impede the quality of services but can be solved using locally available resources, and
- Recognize that all involved staff members are responsible for the quality of care, to provide a platform for them to share ideas, improve their working environment, and improve the quality of their work.

Specific quality improvement opportunities and a structure to promote CQI were conceptualized, planned, and implemented by RHAC management with the guidance of a quality coach[19] — the resident clinical advisor. The quality coach defined the goals of the CQI system and ensured ownership by involving all levels of staff and explaining the process carefully before implementation. A CQI manual was drafted for use by the Associate Director for Clinical Services, clinic managers, and other supervisors. RHAC supervisors are encouraged to view themselves as helpers, rather than as inspectors looking for trouble. As outlined in the CQI manual, they are instructed to:

- Tell the staff that they know better than you what can be improved in their clinic;
- Emphasize the solution, not just the finding of problems;
- Explain that most problems are the result of the system, not the individual; and
- Point out the very good things that go on in the clinic.

To identify and clarify processes and problems with quality, the RHAC CQI system follows a four-step process:

- A tour of the clinic by the Director for Clinical Services;
- Client interviews;
- Observation of provider-client interaction using a series of checklists; and
- Self-assessment meetings where staff identify problems and discuss an action plan to improve services.

[19]A quality coach is someone who has received training in quality concepts and techniques and provides internal technical assistance, reinforcement, and guidance for quality within an organization (Ippolito, Harris, and Lauro, 1996).

	Problem	Solution
Round 1	Monthly supply systems were not on time, causing stock-outs on contraceptives and medical supplies.	Changed supply system from monthly to six months' resupply; trained clinical managers on how to calculate stock needs and organize dispensary.
	Clients had to wait a long time for Norplant® implants insertion at Sihanoukville clinic; clinic manager was the only one trained to provide this service.	Trained two midwives in inserting and removing Norplant® implants at the Sihanoukville clinic. After this training, the number of Norplant® implants clients increased dramatically in the first quarter of 1998.
	Walk-in clients for pregnancy tests had to wait a long time for the midwife who would perform the pregnancy test.	Changed procedure so that clients can go directly to the lab for the test and result and do not have to wait for the midwife.
Round 2	Male providers were not strong in STD management.	Provided all male providers and dispensary technicians with 15-day training. Now they are comfortable providing services to men.
	Waiting time was long for potential new FP clients.	Midwives can conduct a pregnancy test in their room to rule out pregnancy, and have FP supplies in their room so clients do not have to go to the dispensary.
Round 3	Midwives had problems counseling FP and antenatal clients, giving them inaccurate or incomplete information.	To improve the quality of counseling, the clinics reviewed their FP and antenatal care counseling processes. They revised the counseling checklists and trained providers to use them. Managers were asked to supervise contact between providers and clients to ensure the use of counseling checklists.
	Midwives were unable to accurately diagnose and treat STDs, resulting in wasted resources and increased waiting time.	To improve the diagnosis and treatment of STDs, a flow chart and a training course were developed. Providers were then trained in the syndromic approach of STD and the use of the flow chart. Trainers will follow up with the providers on site, and clinic managers will supervise them.

The first quality improvement visit took place in the first quarter of 1998. Since then, RHAC has conducted three additional rounds of supervision visits using its quality improvement system. Some examples of problems identified and actions taken are illustrated above.

Changes Over Time

As the process unfolded and RHAC became more experienced in implementing its system, it recognized changes needed for system improvement. The process is an evolving one and truly encompasses continuous quality improvement, not only of the staff but of the system itself. Two major changes during this time were 1) methodology for client interviews, and 2) quantification of observation tools. RHAC found that client exit interviews administered by clinic staff have limitations as a tool for assessing client satisfaction. Cambodian women were very reluctant to criticize staff and client services and virtually always answered positively.

RHAC sought to get a more accurate assessment of clients' experience and their perception of quality of care at the clinic. Home interviews with a same-sex interviewer based outside the RHAC clinic were tried in rounds 3 and 4. While these interviews were an improvement and more effective at gaining honest client feedback, they were also problematic. They were difficult to implement and suffered from selection bias, as many clients were not traceable. Thus, RHAC will return to using exit interviews but will revise the questionnaire to better reflect RHAC's interest in the perceived quality of care as defined by its clients. It will continue to use a same-sex interviewer who is based outside the RHAC clinic.

Through its experience and through input from SEATS, RHAC realized it needed to quantify its tools for a more accurate measure of quality improvement. An important key to improving quality is to support and strengthen the use of qualitative and quantitative data. This provides a level of objectivity essential to the process. Information-based decision making helps staff approach quality problems and potential solutions in a scientifically sound, measurable, and innovative way. Thus, after the second round of the quality assessment, RHAC managers quantified the skill checklists (0-2, with 2 representing correct performance of a skill without prompting) and revised indicators for use in the third and subsequent rounds. One set of results from this process is shown in Table 4. RHAC can now see improvement in problem areas indicated in round 3.

Table 4. Results of Clinical Skills Assessment, Rounds 3 and 4 of CQI (in percent)

Skills Assessment	Phnom Penh 1		Phnom Penh 2		Sihanoukville		Battambang		Average	
	3	4	3	4	3	4	3	4	3	4
Infection Prevention	92	92	92	92	100	100	100	100	94%	94%
Laboratory	95	94	93	91	86	82	90	90	91%	88%
FP Counseling	97	92	83	83	75	96	96	98	91%	92%
STD	68	82	62	98	50	88	77	100	65%	89%
Depo-Provera	76	100	75	78	67	88	83	100	76%	94%
IUD	93	97	89	90	95	90	100	98	94%	96%
Condom	94	100	100	100	100	100	100	100	97%	100%
Norplant® Implants	98	100	93	96	100	95	100	91	98%	97%
Antenatal Care	73	100	100	100	58	85	76	100	75%	97%
Average	87.3	95.2	87.4	92	81.2	91.5	91.3	97.4	86.8	94.6

During a SEATS-supported consultancy, the entire CQI system was reviewed. As a result, other important changes are being implemented. RHAC is decentralizing the responsibility for the quality of care to the clinic level and shifting the focus of its CQI efforts to how clients perceive the quality of services at RHAC. Action plans are now the responsibility of the clinic manager, not the Associate Director for Clinical Services. A number of clinical quality of care indicators are being developed to be followed on either a monthly or yearly basis. Clinic managers will perform the skill assessments, and all midwives will be observed twice a month. RHAC will continue to use the six-month visits by the Associate Director for Clinical Services to review the action plans, discuss control charts and skill assessments, and observe problem areas.

RHAC has become quite committed to the quality improvement process and has discovered that it is surprisingly easy to get staff talking among themselves, in cross-functional groups and without supervisors from outside the clinic. Staff enjoy the interplay and discussions, become more assertive, and use the system to direct management's attention to personnel problems, policy issues, etc. Problems of access, quality of care, and management are identified and solutions are posited. Management has a better understanding of problems in the clinics, and staff members feel more involved and invested in the work they are doing.

Organizational Development

Financial and institutional sustainability are integral to SEATS' overall strategic approach to enhancing access and improving quality of family planning and reproductive health service and maintaining and/or continuing to expand services after SEATS' input has ended. SEATS' approach to sustainability is to identify, select, and strengthen institutional, financial, and contextual elements directly related to a particular service delivery system or organization. This approach significantly enhances the potential for continued family planning and reproductive health service delivery.

One of the primary objectives under the SEATS subcontract agreements with CMA and RHAC was to improve the institutional and financial sustainability of each organization. For each, improvements were needed in financial sustainability, management systems, organizational structure, administration, and human resources. Strategic planning workshops were held and sustainability plans, a key component of SEATS sustainability and leveraging strategy, were developed for both organizations to guide program activities.

RHAC

> *"RHAC's major challenge over the next three years will be to build on its current strengths and expand its service delivery and training capacity while maintaining its current reputation for quality. This will require expanding current staffing and developing its human resource base; strengthening its capacity to manage internal administration, finances, and program support; expanding and strengthening its linkages with other organizations working in the health sector; and, improving its ability to generate service fees and grant funds from diversified sources."*
>
> *–RHAC Strategic Plan 1997–2000*

During the strategic planning workshop conducted in 1997, strengthening RHAC's financial planning and management systems was listed as the highest priority. Dependency on USAID, as the single critical source of funding with a relatively short duration, was perceived as a significant threat to RHAC's long-term financial security. Financial insecurity affected RHAC's reputation, as well as staff morale, staff continuity, and service delivery. Cost recovery and the

ability to calculate, monitor, and contain costs needed improvement. Further, longer-range financial planning and a comprehensive fund-raising strategy were lacking.

While financial management was a priority, constraints intrinsic to Cambodia, i.e., lack of trained manpower in accounting and administration, political instability, and different donor requirements, all contributed to delays. In the transition from FPIA to SEATS, new accounting procedures and different reporting requirements led to confusion. Political instability in 1997 resulted in an evacuation and a stop-work order, delaying the arrival of the Institutional Development Advisor. SEATS program activities began again in January 1998, but at the same time, there was a complete turnover in administrative and finance positions at RHAC. RHAC was able to overcome these obstacles, however, and made significant progress in improving the financial sustainability of the organization during the remainder of the subcontract period. Activities undertaken included 1) improving financial sustainability and management, and 2) mobilizing and diversifying resources. These activities are discussed below.

Improving Financial Sustainability and Management

A detailed costing analysis was conducted in February 1999. This study provided RHAC with basic cost indicators, such as cost per patient visit in each of the four clinics, cost per client served and/or CYP through the community-based service delivery program, and cost per training day through the Training Department. Other aspects of RHAC's operations were examined as well, such as current pricing policies for services versus prevailing market prices and the utility of adding some of the more sophisticated medical technologies that have been added (i.e., operating theatre, ultrasound) or were being considered for inclusion in the clinics. The costing exercise gave RHAC a framework for developing a computerized accounting system that tracks costs by program and service delivery categories as well as by funding sources. This exercise also provided RHAC's management team with better financial information with which to evaluate past and future decisions, and, moreover, gave RHAC staff the skills to conduct the same types of analysis without external assistance in the future.[20]

[20] Please see the final report for results and recommendations of the costing study, "A Cost Analysis of the Reproductive Health Association of Cambodia" by Fiedler, Holley, and Chivorn. October 1999.

Also, to improve financial sustainability and management, a Financial Planning and Management Manual was developed, which includes a comprehensive chart of accounts that can be expanded over time. Fringe benefit costs are now being managed collectively as an indirect cost across all funding sources based on labor costs charged to grants. Finally, all grants now include a line item that makes some contribution to core costs (Huff-Rousselle, 1999).

Mobilizing and Diversifying Resources

Toward the end of 1998, RHAC recruited a well-qualified Administrator. Before this, the position had been occupied by three different individuals, then had remained vacant for several months. RHAC gradually delegated responsibilities that were previously handled by senior management and strengthened administrative systems. Inventory systems for fixed assets were brought up to date, logistics management procedures were revamped, and the personnel policy manual was redrafted. To aid in recruiting and retaining qualified staff, an issue that had plagued RHAC's development, salaries were reviewed and revised for some positions, and a new benefits package was introduced, including a pension plan with a seven-year vesting schedule.

In Cambodia, a key ingredient to resource mobilization and diversification is developing proposal writing and English language skills, as well as budgeting and program planning skills. SEATS' support allowed RHAC management and staff to participate in international, regional, and local training in these areas, and provided valuable in-service training through the full-time Institutional Development Advisor. RHAC management now has the ability to network with foreign donors and international NGOs, prepare proposals, and negotiate contracts. Throughout 1998 and 1999, RHAC senior management wrote and submitted proposals, with assistance from the Advisor. The proposal for the largest grant received, $700,000 from the EU/UNFPA, was written solely by RHAC staff. RHAC succeeded in diversifying its funding base from two donors to eight. Currently, other sources of support include:

1. IPPF for Norplant® implants and funds to build a new clinic in Kampong Cham
2. UNFPA for the Adolescent Program
3. CARE for a factory-based project

4. World AIDS Foundation for strengthening STD/HIV/AIDS outreach
5. MOH through KfW for providing in-kind support in the form of contraceptives
6. European Commission for providing in-kind support in the form of STD treatment and testing supplies

"We've been able to improve RHAC's management capacity through financial management and learning to network in country and outside the country. We won't always have the support of SEATS and now we know other groups and how to bring in technical assistance."

—Dr. Var Chivorn, RHAC
Deputy Director, July 1999

RHAC has been successful in mobilizing and diversifying its funding sources. It increased the amount of non-USAID funding as a percentage of recurrent costs from 15 percent in 1997 to 45 percent in 1998. It is estimated that in 1999, non-USAID funding will have exceeded 50 percent of recurrent costs. Further, RHAC has increased income earned locally from fees and interest by almost 30 percent between 1997 and 1998 and by an additional 10 percent in 1999 (Hare, 1999).[21] RHAC is most proud of the fact that it is the first local NGO in Cambodia to receive funding directly from the USAID Mission. This success has paralleled and provided the impetus for other needed changes in organizational structure and administrative systems.

In 1998, RHAC experienced significant organizational growth in staff size (from roughly 40 to 80 employees), office locations, and program activities. Including the new clinic in Kampong Cham, RHAC now has nine offices. This growth necessitated more structure, a stronger upper-level management team, and most critically, development and strengthening of middle-level management. A revised organizational structure, and again, training have played a large role in strengthening middle-level management to support this diversification and growth (Huff-Rousselle, 1999).

RHAC Training Services

Developing a training capacity and establishing itself as a training organization were identified as important objectives for RHAC for several reasons. First, expanding the number of providers and service delivery points in Cambodia (with an estimated unmet need of 86 percent) is key to increasing the contraceptive prevalence rate.

Second, improving the quality of care will increase continuation rates. Third, training of other providers will create important linkages for RHAC in its further activities, and, hopefully, another source of income.

[21] For more documentation on RHAC's leveraging success, please refer to the SEATS publication: "The Reproductive Health Association of Cambodia, A Leveraging Success Story: Performance Result Three Leveraging Site Documentation", September 1999.

In addition to the training courses it offers its clinic staff and HDT workers, RHAC also offers training courses to staff of governmental and NGOs in Cambodia. RHAC's Training Department now consists of five trainers. The Program Coordinators for the HDT Department, staff with the Adolescent Program, and many of the clinical staff have been trained as trainers as well. All RHAC training is geared to address the institutional and service delivery needs of its trainees, to allow providers to practice skills learned, and to use a wide variety of modalities.

During 1998, RHAC made a concerted effort to strengthen its Training Department. A SEATS/World Education consultant helped RHAC to develop and conduct two tailor-made TOT courses held with in-service feedback and training between the two courses. Since RHAC's training programs were already strong, part of the inspiration for this push was a plan to market RHAC's training services to other NGOs. Some NGOs have paid tuition to join RHAC courses or have subcontracted with RHAC to conduct courses for them. However, the demand for the type of training RHAC offers was less than anticipated, perhaps because MOH is now offering courses similar in content to those of RHAC. However, some NGOs continued to ask RHAC for training assistance.

RHAC continues to work with the International Women's Development Agency (IWDA): twelve staff received five days of training on CBD programs, and the training staff provided technical assistance to seven IWDA staff in developing training curriculum and materials for training CBD workers. RHAC has also begun work with Partners for Development under a grant awarded by UNFPA to Partners for Development for a new CBD program. RHAC is also providing clinical and lab training to MOH staff. Eight students from the Nursing School practiced laboratory activities in the clinic in Phnom Penh.

CMA

Like RHAC, CMA conducted a strategic planning workshop, revised accounting systems, made changes to its organizational structure, and improved fundraising capabilities. During its strategic planning workshop conducted in September 1998, CMA established the following tasks and goals as priorities for the next three years.

- Strengthen general administration, planning, budgeting, and reporting capabilities.
- Obtain funding for and recruit an Executive Director and one expatriate advisor.
- Strengthen relationships with other organizations, such as the NMCHC and other government organizations, as well as potential funding agencies inside and outside of Cambodia.
- Create a community-level visiting education program for women through CMA branches and other NGOs.
- Expand safe motherhood training for midwives.
- Strengthen and build closer internal relationships between the Executive Board, CMA headquarters staff, branch leaders, and CMA's membership.
- Promote midwives in Cambodia as skilled health providers.
- Continue training for midwives and TBAs.

Soon after the strategic planning workshop, CMA's founder and former president was hired as CMA's first Executive Director. During the ensuing months, many things were accomplished, particularly in the first four priorities and the continuation of training for safe motherhood. The Executive Director and her staff worked on recruiting an expatriate advisor through Volunteer Services Overseas (VSO). The request has now been approved by the British Embassy, and a midwife/VSO is expected in January 2000. The request to the British Embassy specified that the midwife have management skills and experience so that she could help CMA with the managerial goals listed as the first priority (Huff-Rousselle and Ren, 1999).

Short-term consultants worked with CMA to 1) generate and diversify resources and 2) improve financial planning and systems by developing an accounting manual and modifying the existing system.

Exhibit 4. An Experimental Fund-Raising Event

For some years, while she was still President of CMA, CMA's Executive Director felt that a fund-raising event, such as a dance, would be a good idea. A request from Rattakiri province branch for clinical equipment inspired CMA's first experiment with such an event. In April, on the Saturday evening before Khmer New Year, CMA held a Concert for Charity, featuring a dance and a raffle.

When the event was initially suggested, Executive Committee members expressed some concern and resistance. Some members thought CMA's donors might not be pleased with CMA, since they had already given CMA funds for its activities. Others were simply concerned that the event might lose rather than raise money. However, after some discussion, the Committee believed it was an experiment worth trying.

The Executive Director and Executive Committee members went individually or in pairs to visit various companies and ministries and solicit financial or in-kind support for the event. In addition to in-kind donations, cash and checks donated for the event amounted to $1,224. CMA's staff and Executive Committee members sold approximately 600 tickets at two dollars each, earning ticket revenues of roughly $1,200. Individuals purchased tickets even when they knew they would be unable to attend, and some gave extra cash with their purchase. The estimated attendance—around 400 people—was about two-thirds of the number of tickets sold.

Event expenses included securing the venue and musicians. Ticket revenues were used to buy a television as a prize. The Executive Director donated the third and fourth prizes. Other costs included printing of tickets, banners, other advertising, and miscellaneous expenses.

Net income from the event was approximately $1,400, of which $240 was used to purchase a vacuum extractor, a blood pressure cuff, delivery materials, and a thermometer for the Rattakiri branch. While this may seem like a very small sum, in a country where per capita GNP is $300, it is a significant amount for an initial effort.

Particularly since this event was a first and therefore a learning experience, it will be useful for CMA to try something similar again, perhaps next year. The event took time and effort from staff in planning, organizing, and following up on the collection of some promised donations. The Executive Director feels that two problems might again be encountered if CMA repeats the event. First, some members of the Executive Committee found it awkward, even shameful, to solicit donations. Second, the participation of Executive Committee members was uneven, leaving more work for some and making both fund raising and ticket sales less effective.

The first event may itself change attitudes among the CMA members. Its success may encourage more Executive Committee members to be more active in supporting future endeavors and, once a relationship has been established with contributing organizations, it should be easier to solicit contributions next year. A video shot during the event captures the spirit of the evening with pictures of young people dancing Western style, older people dancing Khmer style, and jubilant winners running up to collect their prizes. In addition to the revenues earned, the event itself was a good promotional and publicity vehicle for CMA and for midwives overall.

—Ms. Neang Ren, CMA Executive Director
Maggie Huff-Rousselle, RHAC Institutional Development Advisor

CMA now has 22 branches, three in Phnom Penh and in 19 of the 21 provinces; branch meetings are held twice a year. Approximately 2,300 midwives, or 60 percent of all midwives in Cambodia, are estimated to be members of CMA, an increase of 891 members and eight branches in two years (Huff-Rousselle and Ren, 1999).

Training and Human Resource Development

Building technical competence has been a mainstay of the SEATS program in Cambodia. SEATS supported training for over 1,500 Cambodians through RACHA, RHAC, and CMA. A complement of local, regional, and international training programs in such areas as clinic and counseling skills, family planning, safe motherhood, logistics, and management has helped to fill the gap of qualified health practitioners and managers who can provide reproductive health care.

"RHAC and CMA are the best local NGOs. They have good activities and have made good progress compared to other NGOs and associations."

—Dr. Eng Hout, Director General for Health, Ministry of Health, July 1999

Priority areas for training in quality and access included client-provider interaction, technical competence in clinical procedures, problem-solving skills, access and barriers, and infection prevention. Training for program management has been geared not only to such areas as financial management, but also toward skills for empowering staff. Managers are beginning to encourage their staff to promote quality through use of creative problem-solving, data for decision-making, teamwork, and responsiveness to client needs. Table 5 presents a sample of the myriad of training used to build the capacity of RACHA, RHAC, and CMA, as well as of their local partners and MOH personnel.

Building technical competence has been a mainstay of the SEATSprogram in Cambodia.

RACHA 1999

Table 5. Summary of International, Regional, and Local Training Activities for RACHA, RHAC, and CMA Staff Development: 1997–1999

Course/ Conferences	RHAC	RACHA	CMA
INTERNATIONAL AND REGIONAL Center for Development and Population Activities (CEDPA) Women in Management Workshop	Associate Executive Director for Clinical Services Training Manager		Executive Director
CEDPA Institutional Development Workshop	Executive Director RHAC Administrator		
CEDPA Youth Development and Reproductive Health	Youth Program Manager		
International Conference on HIV/AIDS in Asia and the Pacific	Executive Director	Reproductive Health Coordinator; Pursat Provincial Health Dept. MCH Director	
Managing health Programs in Developing Countries, Harvard University	Executive Director		
Financing Health Care in Developing Countries, Boston University	Associate Director		
Ultrasonography	Doctor		
Planning and Managing a Community-based Program, Indonesia	Program Manager		
Observation Visit Youth Reporductive health Programs, Indonesia	Youth Program Manager		

Table 5 (continued)

Course/ Conferences	RHAC	RACHA	CMA
Logistics Management FPLM, Washington, D.C.		• Logistics support officer, RACHA • National Reproductive Health Program Deputy • Director, EDB • Deputy Director, Central Medical Store • RACHA Logistics Coordinator	
International Conference Midwives		Reproductive Health Coordinator	President Acting President Executive Director Branch Leader
SEATS II MAPS Dissemination Conference and Workshop, Harare		Reproductive Health Coordinator	President
LOCAL TRAINING			
Logistics Management		710 OD pharmacists, hospital pharmacists, health center personnel, MOH staff, RACHA staff	
Life-saving Skills		28 midwives	2 midwives
HDT Training/Refresher, 2nd Refresher	688 HDT Workers		
Clinical Training/Refresher	42 staff		
Training of Trainers	6 staff	• 6 Battambang Referral Hospital midwives, 2 CMA midwives • 9 RACHA and EDB staff	34 CMA members
English Language	RHAC staff		28 staff, branch members

Conclusions and Lessons Learned

Although a great deal of work remains to be done in Cambodia, over the course of these three years, the reproductive health situation has improved significantly in the public and private sectors. Service delivery output has increased, quality of services has been enhanced, and prospects have improved for sustaining services in the future. The use of modern methods of birth spacing has more than doubled in this time period (from 7 to 16 percent), and fertility among all age groups has shown a corresponding decline.[22] SEATS and its partner organizations have contributed to these gains through an emphasis on:

1. Increasing access to quality reproductive health services;
2. Utilizing a client and community orientation;
3. Supporting quality and access from the top by developing national policies and guidelines;
4. Building quality and access from the bottom through training and CQI systems; and
5. Building sustainable program operations.

RHAC and CMA have demonstrated their ability to respond well to a volatile environment, increasing the likelihood that they will be able to continue the provision of reproductive health services to Cambodians. CMA has grown from a nascent association to an organization that plays a vital role in increasing the quality of midwifery services and access to those services. The MOH now realizes the important role of midwives, along with doctors, in providing quality reproductive health care. As Dr. Eng Hout, Director General for Health, stated:

"It is the policy of the MOH to promote midwives. CMA has the power to push midwives and nurses into the forefront of health care in Cambodia. Physicians and midwives have different roles but we are working together to transform work so each is respected in their role. Both are equal."[23]

CMA

- Instituted a continuing education program for its membership, increasing midwives' knowledge and understanding of important safe motherhood practices
- Established new branch offices and expanded its membership and staff
- Renovated its clinic and trained the CMA clinic midwives in LSS techniques
- Improved its financial management and accounting procedures
- Improved its fund-raising and negotiating capabilities, securing additional funding and technical support post-SEATS

[22]MOH. 1999. National Health Survey, 1998., Phnom Penh, Cambodia, pp. 83-84
[23]Interview with Dr. Eng Hout, Director General for Health, MOH, July 1999.

SEATS supported RHAC through a period of rapid growth. RHAC has progressed from initial uncertainty about USAID funding to successful donor diversification; it has expanded from two to five clinic sites with a corresponding expansion of its HDT program. Staff improved their quality of service provision, and the number of Cambodians seeking RHAC's reproductive health services continues to increase. For many years to come, RHAC will continue to play a vital role in increasing access to services and complementing and supporting public-sector initiatives in reproductive health.

RHAC

- Instituted and reinforced its CQI system at its clinics
- Researched clients' perceptions of its services and is testing new promotional materials
- Revitalized its HDT program and is promoting clinical service through the HDT network and other NGOs, holding community development activities, and exploring mechanisms to improve staff performance
- Established and expanded it youth program and is reaching thousands of youth quarterly through peer education, youth libraries, social events, and rallies
- Secured an alternate source of contraceptive commodities and is improving its inventory management
- Mobilized and diversified its resources, attracting the non-USAID support necessary to continue to expand its birth spacing and reproductive health service delivery

RACHA, as a USAID-funded technical support project, has worked closely with the MOH to strengthen public-sector service delivery. National policy and guidelines reinforced by competency-based training have proved key to real improvement in quality of services and greater access. Logistics management is improving, ensuring adequate supplies of contraceptives at health centers and referral hospitals as well as community outreach workers. New safe motherhood practices are beginning to save lives of mothers and children, increasing the number of women seeking health care by trained providers.

RACHA

- Conducted a Safe Motherhood Situation Analysis and maternal mortality PATHWAY study to better assess and design MCH program interventions
- Assisted the MOH with developing and implementing a national safe motherhood policy, strategy, and action plan and is pilot-testing national-level protocols in emergency obstetric care and safe motherhood practices
- Trained midwives in competency-based LSS improving quality of service delivery, increasing the number of women seeking care at referral hospitals, and saving lives of mothers and children
- Enhanced the EDB's national LMIS for more accurate monitoring and procurement of commodities
- Developed and distributed a Logistics Management Procedure Manual and companion training manual
- Trained EDB staff, OD and referral hospital pharmacists, and health center store keepers in proper logistics management techniques

Lessons Learned

The following are some of the key lessons learned that apply across all of SEATS' program operations in Cambodia:

1. *Building collaboration*

A collaborative and reciprocal relationship with government is essential. Says Dr. Eng Hout, *"RACHA, RHAC, and CMA followed policies well. They made an effort to follow and work within them."*

> *"The commitment from the government is very important. Without them we can't do anything," explains Dr. Vathiny.*[24]

This kind of respect between institutions allowed RHAC to secure contraceptive commodities from the MOH and enabled HDT workers to provide Depo-Provera; CMA to strengthen relations with provincial health departments and institute a CEP for midwives; and RACHA to pilot-test LSS techniques for safe motherhood.

[24] Schlangen, "Cairo +5: Identifying Successes, New Challenges," *Population and Habitat Update*, vol. 11, no. 3, 1999.

2. *Extending project timeline*

A subproject time period of two to three years is too short to provide technical assistance and program interventions, especially for a new indigenous NGO. This short time period causes an inherent tension between prioritizing rapid expansion of access, reaching the underserved with quality services, and enhancing long-term sustainability. As Dr. Ouk Vong Vathiny, Executive Director of RHAC, stated:

> *"We need a longer horizon. It's hard to be named as an NGO and make a profit in this situation, at this time and in this short time period. Expectations are very high. Maybe ten years from now we will manage this. For example, India has had years of support, but in Cambodia this is not the case."*

3. *Overcoming cultural barriers*

There are strong cultural barriers to midwifery practice in Cambodia. Unwavering deference to the views of superiors or those with higher education, and accommodation to common beliefs and practices of clients and colleagues even when one has medically sound knowledge to the contrary, are just a couple of barriers that must be overcome to successfully promote midwifery practice.

4. *Ensuring accurate translation*

Translation of training materials, curriculum, presentations, and tests in Khmer was very difficult and time consuming. None of the expatriate advisors could have operated as well as they did without a Cambodian counterpart who had the combination of subject knowledge and English language skills to translate. This combination of skills is a rare commodity in Cambodia. Time must be taken to allow for the thorough checking of translated material, and program interventions, such as training and production of training materials, must be flexible enough to allow for correction of translation mistakes.

5. Re-evaluating testing procedures

Testing, both written and clinical performance assessment, poses considerable stress for trainees. The level of sophistication in taking written examinations in general, and with tricky multiple-choice/cluster questions in particular, is low. Disappointment (and possible fear) at not succeeding is not handled easily and causes considerable discomfort for all concerned. Further, Cambodians are unusually sensitive to the correlation of status and leadership roles within the group and their score on an exam. Those who had status based on their position felt that they lost respect and credibility when their score was known to be lower than others. There are cultural and historical reasons for this phenomenon, and trainers should make every attempt to provide a supportive atmosphere for evaluating clinical knowledge and skills, while not compromising assessment of competence (Kroeger and Thomas, 1999).

6. Ensuring a well-trained health care workforce

The greatest limiting factor to all Cambodian health programs is the scarcity of well-trained health professionals and health care workers. This has resulted in a "brain drain" that has had a profound impact on the public and private sectors. Local indigenous organizations, such as CMA and RHAC, cannot provide the same salary or work environment as an international or bilateral organization. Consequently, recruiting and retaining employees is difficult. Trained health workers are eagerly sought out by those who require their services. RHAC has dealt with many instances where a staff member went through its rigorous orientation and training process, only to be lured away by another organization that offers salaries that RHAC cannot match. Such occurrences result in high turnover rates that undermine the overall strength and continuity of the team as well as program operations.

To offset this trend, RHAC raised salaries, instituted a fringe benefits package, and revised personnel policies. While this has helped, it has not been without a financial cost to RHAC. Organizations must work together to institute fair and consistent personnel policies and salary structures, train health professionals and health care workers, and share human resources when needed.

Looking Ahead

Cambodians have survived a brutal recent history with their sense of determination and hope unscathed. Slowly, they are emerging from the seemingly unending effects of their war-torn past, moving toward a future in which they are no longer powerless victims, but empowered architects of a new destiny. A sound program for reproductive health and family planning is a key cornerstone of this transformation. With strong partnerships, flexible programming, and ongoing commitment to service improvement, Cambodia can look forward to a healthier future for all of its people.

Mammen 1999

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Appendix A

TRAINEE CLINICAL EXPERIENCE FOR RACHA LIFE-SAVING SKILLS TRAINING

SKILL UPGRADING TRAINING FOR MIDWIVES: BASIC LSS

CLINICAL EXPERIENCE FORM

Training #5/99 Date 29//11-10/12/99

Trainees	ANC first visit	ANC revisit	Admission in labor	Parto-graph	First stage of labor	Second stage of labor	Third stage of labor	PPH simulation		Normal baby	CPR simula-tion	First day post partum	3-6 days post partum	Infection control	Family planning
Nut Chinvuthy (Wat Por HC)	5 8/12 THY	7 8/12 THY	9 8/12 THY	8 10/12 THY	8 8/12 THY	8 10/12 THY	8 10/12 THY	Re 2 9/12	Bi * 3 9/12	8 9/12 THY	* 3 9/12	6 9/12 THY	5 9/12 THY	7 9/12 THY	7 9/12 THY
Sam Sida (Kompong Loung HC)	5 9/12 VANN	6 8/12 VANN	7 9/12 VANN	8 10/12 VANN	8 10/12 VANN	7 10/12 VANN	7 10/12 VANN	2 9/12	* 3 9/12	7 9/12 VANN	* 3 9/12	7 9/12 VANN	7 9/12 VANN	5 9/12 VANN	7 9/12 VANN
Chhun May Kach (MCH)	7 6/12 CHHET	6 6/12 CHHET	8 8/12 CHHET	7 8/12 CHHET	7 8/12 CHHET	5 8/12 CHHET	7 8/12 CHHET	1 9/12	2 9/12	8 8/12 CHHET	* 3 9/12	8 9/12 CHHET	6 9/12 CHHET	8 8/12 CHHET	7 9/12 CHHET
Dari Kanika (Wat Loung HC)	6 6/12 YOKLY	6 6/12 YOKLY	7 7/12 LY	7 10/12 LY	6 10/12 LY	6 10/12 LY	8 10/12 LY	1 9/12	4 9/12	5 7/12 LY	* 3 9/12	6 7/12 LY	5 7/12 LY	5 7/12 LY	5 9/12 LY
Nuon Navy (Kandeng HC)	5 9/12 KY	4 9/12 KY	6 9/12 KY	7 10/12 KY	7 9/12 KY	6 10/12 KY	7 9/12 KY	3 9/12	2 9/12	6 9/12 KY	3 9/12	6 9/12 KY	5 9/12 KY	6 9/12 KY	5 9/12 KY
Yin Daroeum (Krokor HC)	5 9/12 KHENG	5 9/12 KHENG	7 9/12 KHENG	7 10/12 KHENG	7 9/12 KHENG	8 10/12 KHENG	8 9/12 KHENG	2 9/12		8 9/12 KHENG	3 9/12	7 9/12 KHENG	5 9/12 KHENG	7 9/12 KHENG	5 9/12 KHENG
Total	33	34	44	44	43	40	45			42		40	33	38	36

* : observed

: Performing with real case

Re: Manual Removal of Placenta

Bi: Bi-Manual Compression

The date that is stated in each column is the date of checking off.

Test: CPR : Kheng + Ky

Bi: Chhet + Ly

Re: Thy + Vann

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