

ANNEX 2

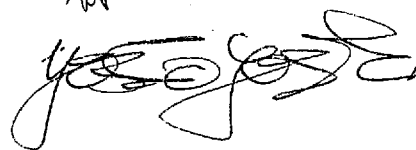
**JOINT EVALUATION REPORT
ON THE JAPANESE TECHNICAL COOPERATION PROJECT
FOR PHASE II OF
THE MATERNAL AND CHILD HEALTH PROJECT**

**JAPAN INTERNATIONAL COOPERATION AGENCY
JAPAN**

AND

**MINISTRY OF HEALTH
THE KINGDOM OF CAMBODIA**

OCTOBER 18, 2002 *hw*



Joint Evaluation Report
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Abbreviations

AIDS	Acquired Immunodeficiency Syndrome
ANC	Ante-Natal Care
CoCom	Coordination Committee
CP	Counterpart
CPA	Complementary Package of Activities
CTG	Cardiotocography
DR(s)	Doctor(s)
EOC	Essential Obstetric Care
FY	Fiscal Year
GA	Grant Aid
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit GmbH
HC	Health Center
HIV	Human Immunodeficiency Virus
HRD	Human Resource Development
ICU	Intensive Care Unit
IMR	Infant Mortality Rate
JCC	Joint Coordinating Committee
JICA	Japan International Cooperation Agency
JOCV	Japan Overseas Cooperation Volunteers Program
MA	Medical Assistant
MCH	Maternal and Child Health
MMR	Maternal Mortality Ratio
MOH	Ministry of Health, Cambodia
MPA	Minimum Package of Activities
MW(s)	Mid-wife(-ves)
NGO	Non Governmental Organization
NMCHC	National Maternal and Child Health Center
NS	Nurse
OB/GYN	Obstetrics and Gynecology
OD	Operational District
OPD	Out-Patient Department
OT	Operation Theater
OT/NEO	Operation Theater/Neonatology
PAP	Priority Action Programme
PCM	Project Cycle Management
PDM	Project Design Matrix
PHD	Provincial Health Departments
PMTCT	Prevention of Mother to Child Transmission of HIV
RACHA	Reproductive and Child Health Alliance
R/D	The Record of Discussion
RH	Referral Hospital
RTC	Regional Technical Care
SEDP	Socio-Economic Development Plan

TBA(s)	Traditional Birth Attendant(s)
TC	Technical Cooperation
TOT	Training of Trainer
TSMC	Technical School of Medical Care
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
VCT	Voluntary Counseling and Testing
WHO	World Health Organization

1 Introduction

JICA dispatched the Mid-term Evaluation Team (hereinafter referred to as “the Team”) to Cambodia from September 28 to October 18, 2002 for Phase II of the Maternal and Child Health Project (hereinafter referred to as “the Project”). The Team evaluated achievements so far made in the Project, which started in April 2000. The Team is headed by Dr. Yoshio YAZAKI.

In collaboration with Cambodia counterparts, Japanese experts, and the Team prepared this Joint Evaluation Report to summarize the achievements of the Project, to evaluate by five criteria, and to give some recommendations for the remaining period of implementation.

The members of the Team are shown as follows:

	Name	Mission	Job Title
1	Dr. Yoshio YAZAKI	Team Leader	President, International Medical Center of Japan, Ministry of Health, Labor and Welfare
2	Dr. Seiki TATENO	General Medicine	Director of 1 st Expert Service Division, Bureau of International Cooperation, International Medical Center of Japan, Ministry of Health, Labor and Welfare
3	Ms. Yoko KONISHI	Nursing	Vice Director of Nursing Department, International Medical Center of Japan, Ministry of Health, Labor and Welfare
4	Mr. Mitsutoshi SUZUKI	PCM Evaluation	Senior Consultant, Consulting Department, TOYO Engineering Corporation
5	Ms. Naoko SUGITANI	Cooperation Evaluation	Staff, First Medical Cooperation Division, Medical Cooperation Department, JICA

2. EVALUATION PROCESS

2-1 Methodology of Evaluation

The Team and Project team jointly evaluated the Project as its mid-term evaluation in accordance with PCM Method. The Project team consists of Cambodia counterparts and Japanese experts.

- For this evaluation, the teams utilized Project Design Matrix (hereinafter referred to as “PDM”) of this Project. A PDM is a summary table of the overall description of the Project, its objectives and environments.
- The original PDM (PDM₀) was issued on January 2000 at R/D and modified on July 2001 by Japanese Consultation Team as PDM₁.
- The both teams confirmed the achievements of the Project in terms of its super goal, overall goal, project purpose, outputs, activities and inputs stated in the PDM₁ through literature survey, interviews, questionnaire as well as two workshops. The teams also surveyed NMCHC, and a referral hospital, a health center and an operational district in Kampong Chhnang.
- The both teams conducted the evaluation based on the five (5) criteria, namely Relevance, Effectiveness, Efficiency, Impact and Sustainability.
- JCC authorized this Joint Evaluation Report.

The PDM₁ is shown in ANNEX 2.

2-2 Criteria for Evaluation

The evaluation was conducted based on the following five (5) criteria, which are the major points of consideration when assessing JICA-assisted development projects.

- 1) Relevance: The relevance is the measure for determining whether the outputs, the project purpose and the overall goal are still in keeping with the priority needs and concerns at the time of evaluation.
- 2) Effectiveness: The effectiveness is concerned with the extent to which the project purpose has been achieved, or is expected to be achieved, in relation to the outputs produced by a project.
- 3) Efficiency: The efficiency is the measure for the productivity of the implementation process: how efficiency the various inputs are converted into outputs.

- 4) Impact: The impacts are intended or unintended, direct or indirect, positive or negative changes that occur as a result of a project.
- 5) Sustainability: The sustainability is the measure for determining whether or not the project benefits are likely to continue after the termination of the Project period.

2-3 Implementation Process

Prior to the evaluation, the Implementation Process was developed to grasp facts which lead into evaluation judgement taking the following survey items into consideration.

- 1) Progress Status of Activities
- 2) Implementation Status of Monitoring
- 3) Relationship between JICA experts and Cambodian counterparts
- 4) Beneficiary's concern with Project
- 5) Ownership of Ministry of Health as a Cambodian implementation organization
- 6) Alternative means for Project Effect promotion created by Project

Required data and information, data and information source, and data collection method on each survey item were set up in one matrix sheet.

Those information, source and method were selected from the view points of validity, importance, reliability, accessibility, cost and schedule.

The implementation process is summarized in Table 2-3.

Table 2-3 Implementation Process Summary

Survey Item	Required Data and Information	Data and Information Source	Data Collection Method
Progress Status of Activities	- Activities are implemented on-schedule ?	- Project Report - JICA Expert	- Literature survey - Interview
Implementation Status of Monitoring	- Monitoring System - History of PDM - Reaction to External Circumstance Change - Reaction to Internal Circumstance Change	- Project Report - Monitoring Report - Project Consultation Team Report	- Literature survey - Interview
Relationship between JICA experts and Cambodian counterparts	- Communication - Technology and Skill Transfer - Problem Solution by Cooperation - CP's Advancement	- Project Report - JICA Expert - Counterpart	- Literature survey - Interview - Questionnaire
Beneficiary's concern with Project	- Consciousness Change of Expecting and Nursing mother - Health Status of Neonate and Infant	- Project Report - JICA Expert - Expecting and Nursing mother	- Literature survey - Interview - Questionnaire
Ownership of Ministry of Health as a Cambodian implementation organization	- Attend and Contribution from MOH - Budget Security - Trainee Fixity - Provision of Drug and Material - Publicity of NMCHC - Maternal and Child Health Enlightenment to Cambodian people	- Project Report - JICA Expert - Ministry of Health staff	- Literature survey - Interview
Alternative means for Project Effect promotion created by Project	- Collaboration with other donors - User Fee Collection Rule - User Fee Accumulation and Effective Utilization	- JICA Expert - Donor - NMCHC staff	- Interview - Questionnaire

3 Achievements and Evaluation Grid

Based on the implementation process, inputs from both Japan and Cambodia into the Project, actual performance on each indicator on PDM1, and evaluation grid on five criteria were described in this chapter.

3-1 Inputs

3-1-1 Inputs from Japan side

The followings are inputs from Japan side in to the Project during the past two and half years period.

a) Personnel:

JICA Experts,	long-term:	173 M/M	(Apr.2000 - Sep.2002)
JICA Experts,	short-term:	45 M/M	(Apr.2000 - Sep.2002)
3 rd country experts	for HIV counseling	2	
	for emergency care	2	
JOCV	in Battambang	3	Input by JOCV scheme

b) Provision of equipment and machinery (approx.) :

2000 :	20,211,000 JPY
2001 :	13,710,000 JPY
2002 :	9,053,000 JPY (Up to July)

c) Supporting Local Cost (approx.) :

2000 :	\$139,237
2001 :	\$110,364
2002 :	\$ 73,812 (Up to July)

d) CP Training :

2000 :	57 M/M
2001 :	102 M/M
2002 :	46.5 M/M

3-1-2 Inputs from CAMBODIA side

The followings are inputs from Cambodia side in to the Project during the past two and half years period.

a) Personnel described as below:

Year	2000	2001	2002	2003	2004
Doctor	60	79	82		
MA	19	24	24		
MW/NS	177	228	224		
Pharmacist	7	15	14		
Clinical Lab.	9	9	9		
Others	30	34	34		
Total	302	389	387		

b) Building and facilities (including electricity and water)

c) Local cost (including training cost and CP salary)

Reference of both inputs is shown in ANNEX 1.

3-2 Actual Performance for Evaluation

All activities implemented for three outputs, which will lead into this project purpose, were designed.

1) For Output 1: “The National Maternal and Child Health Center as the national top referral hospital and training center is further strengthened.”

- Activity
- 1-1: Reorganize training division in NMCHC
 - 1-2: Improve general management by sufficient use management cycle
 - 1-3: Revise job description
 - 1-4: Train staff for accounting skills / knowledge
 - 1-5: Establish system of appropriate drug and material management
 - 1-6: Establish hospital maintenance system
 - 1-7: Carry out training for communication among staff and patients
 - 1-8: Provide Health education for patients/families
 - 1-9: Standardize patient care
 - 1-10: Strengthen in-service training

- 1-11: Introduce new paraclinic tests
- 1-12: Implement "Prevention of mother to child transmission of HIV"
National program in NMCHC

2) For Output 2: "MCH capabilities of operational districts (referral hospitals and health centers) in hospital are improved."

- Activity 2-1: Make a plan for training including evaluation
- 2-2: Provide training for field staff
- 2-3: Perform supervision
- 2-4: Strengthen coordination for student training
- 2-5: Train health personnel for health promotion

3) For Output 3: "Collaboration between NMCHC and Department of Human Resources/ National hospitals/Operational Districts (referral hospitals and health Centers) in MCH is strengthened."

- Activity 3-1: Give feedback information to the field after supervision
- 3-2: Revise check lists manuals for supervision
- 3-3: Train supervisors
- 3-4: Establish regular meetings/conferences among hospitals
- 3-5: Cooperation with other hospitals for medical equipment maintenance and repair, and establish National Workshop in NMCHC

As actual performance indicators for this evaluation, the objectively verifiable indicators on the PDM1 were adopted.

- Regarding indicator for Super Goal, the maternal mortality ratio in Cambodia as its objectively indicator is expected to be 200 per 100,000 live birth in 2005 in Cambodia shown in SEDP 2. The rate is not available at the present time.
- Regarding indicators for Overall Goal, five indicators are set up as follows:
 - a) Percentage of births attended by trained health personnel in Cambodia
 - b) Ante-natal check-up rate in Cambodia
 - c) Return rate of Ante-natal Care
 - d) Return rate of complicated postpartum cases
 - e) Neonatal death

According to Demographic and Health Survey 2000, 31.8% of births attended by trained health personnel, and 37.7% of Ante-natal check-up rate, are published. Another reliable indicators c), d) and e) are not available at the present time.

- Regarding indicators for Project Purpose, three indicators are set up as follows:
 - a) Number of births attended by trainees (DRs and MWs)

- b) Ante-natal care number by trainees (DRs and MWs)
- c) Reputations/evaluation by external evaluators

According to the impact evaluation presentation from CP,
 Number of births attended by trained HC MW at home is 3/month (Median) before and 3/month after the training respectively.
 Number of births attended by trained RH MW become 1.5/month (Median) before to 6.0/ month after the training respectively.

Number on Ante-natal care at HC with trained MW is Median 10/month (Median) before to 32/month after training.

According to external evaluators such as international donors, the project purpose could be achieved, if planned outputs will be completed.

- Regarding indicators for Project Output 1, the following indicators are set up.
 - 1-1) Number of trainees
 - 1-2) Number of clients using NMCHC services
 - 1-3) Number of death for perinatal illness
 - 1-4) Drug and material consumption per patient in ordinary wards
 - 1-5) Medical equipment/facility utilization rate
 - 1-6) Post operative infection rate
 - 1-7) Number of deliveries of referral hospitals

Through the Project implementation, 357 NMCHC staffs and 158 provincial staffs were already trained. Daily average of 320 out-patients and 110 in-patients (Total bed number is 150 in NMCHC) use NMCHC services. NMCHC continuously provides neonatal services for serious cases (Death cases: 422 in 2000, 403 in 2001).

Drug and material consumption per patient is being summarized by CPs, while source data were already collected.

Medical equipment utilization rate is very high. In quantity basis, the utilization rates on GA in 1993, GA in 1997, and TC in 1997-1999 were 89/94/88% in 2001 respectively.

Post operative wound infection rate was 12% from June 2000 to June 2001.

Number of test items was highly increase from 14 in 1998 to 32 in 2002.

- Regarding indicators for Project Output 2, the following indicators are set up.
 - 2-1) Number of deliveries of referral hospitals
 - 2-2) Number of deliverables attended by health center MW trainee in

NMCHC (same as Project Purpose indicator a))

2-3) Number of referral cases to referral hospitals

As the above 2-1) indicator, number of deliveries in 70 RH was increased from 11,708 in 1997 to 15,304 in 2001. Reliable indicators for the above 2-3) are not available at the present time.

- Regarding indicators for Project Output 3, the following indicators are set up.

3-1) Number of referred complicated cases to NMCHC

3-2) Number of meetings and conference with other hospitals

Though number of referred cases as the above 3-1) indicator was not available until 1999, the number was slightly increased from 96 in 2000 to 104 in 2001. Hospital Management Seminar was held in September 2000 and four national hospitals and eight provincial hospitals made presentations of hospital management.

Two MCH symposiums were held in March 2001 and March 2002. Physician clinical meeting was re-started on July 2001 and 44 meetings were held.

As results, it can be said that the actual performance was very high through the above indicators review. The actual performance indicators are summarized in Table 3-2-1.

Reference information is shown in ANNEX-5.

Table 3-2-1 Actual Performance Indicator for Evaluation (1/3)

Narrative Summary	Objectively Verifiable Indicators	Actual Performance of Objectively Verifiable Indicators
<p>Super Goal The status of maternal and child health in the kingdom of Cambodia is improved</p>	<p>- Maternal Mortality Rate</p>	<p>According to SEDP2 (1998), the rate is 473 and is expected to be 200 in 2005 per 100,000 live birth</p>
<p>Overall Goal Quality of service for maternal and child health in the Kingdom of Cambodia is improved.</p>	<p>a) Percentage of births attended by trained health personnel in Cambodia b) Ante-natal check-up rate in Cambodia c) Return rate of Ante-natal Care d) Return rate of for complicated postpartum cases e) Neonatal death</p>	<p>According to Demographic and Health Survey 2000, For a) 31.8% of births attended by trained health personnel, For b) 37.7% of Ante-natal check-up rate are published. For c) d) and e), reliable data is not available at present time.</p>
<p>Project Purpose Human resource development for the improvement of MCH, including community health, is strengthened.</p>	<p>a) Number of births attended by trainees (Drs & Mws) b) Ante-natal care number by trainees (Drs & Mws) c) Reputations/evaluation by external evaluators</p>	<p>a) Number of births attended by trained HC MW at home is 3/month (Median) before and 3/month after the training respectively. Number of births attended by trained RH MW become 1.5/month (Median) before to 6.0/ month after the training respectively. b) Number on Ante-natal care at HC with trained MW is Median 10/month (Median) before to 32/month after training. c) The purpose could be achieved, if planned outputs will be completed.</p>

Table 3-2-1 Actual Performance Indicator for Evaluation (2/3)

Narrative Summary	Objectively Verifiable Indicators	Actual Performance of Objectively Verifiable Indicators
<p style="text-align: center;">Outputs</p> <p>1 The National Maternal and Child Health Center as the national top referral hospital And training center is further strengthened.</p> <p>2 MCH capabilities of operational districts (referral hospitals and health centers) Are improved.</p>	<p>1-1 Number of trainees (Drs, Mws, Health Care Managers)</p> <p>1-2 Number of clients using NMCHC services</p> <p>1-3 Number of deaths for perinatal illnesses</p> <p>1-4 Drug and material consumption per patient in ordinary wards (except ICU/NCU)</p> <p>1-5 Medical equipment/facility utilizing rate</p> <p>1-6 Post operative infection rate</p> <p>1-7 Number of paraclinic test items</p> <p>2-1 Number of deliveries of referral hospitals</p> <p>2-2 Number of deliveries attended by health center midwife trainee in NMCHC</p> <p>2-3 Number of referral cases to referral hospitals</p>	<p>1-1 357 NMCHC staffs and 158 Provincial staffs were trained.</p> <p>1-2 Daily average of 320 out-patients and 110 in-patients use NMCHC services.</p> <p>1-3 Total perinatal death is 422 in 2000 and 403 in 2001 in NMCHC.</p> <p>1-4 CPs are summarizing those figures, though source data were collected.</p> <p>1-5 In quantity basis, GA1993/GA1997/TC(97-99) were 89/94/88% in 2001.</p> <p>1-6 Post operative wound infection rate was 12% (52/426) from June 2000 to June 2001.</p> <p>1-7 Number of test items was 14 in 1998 and 32 in 2002.</p> <p>2-1 Number of deliveries in 70 RH was 11,708 in 1997 and 15,304 in 2001.</p> <p>2-2 same as Project Purpose indicator a)</p> <p>2-3 Reliable indicators are not available at present time.</p>

Table 3-2-1 Actual Performance Indicator for Evaluation (3/3)

Narrative Summary	Objectively Verifiable Indicators	Actual Performance of Objectively Verifiable Indicators
<p>3 Collaboration between NMCHC and Department of Human Resources/ National hospitals/Operational Districts (referral hospitals and health Centers) in MCH is strengthened</p>	<p>3-1 Number of referred complicated cases to NMCHC 3-2 Number of meetings and conferences with other hospitals (especially in Phnom Pen area)</p>	<p>3-1 Number of referred cases was not available until 1999, 96 in 2000, and 104 in 2001. 3-2 1 Hospital Management Seminar 2 MCH Symposium 44 Physicians' Meeting 1 PMTCT Network 1 National Workshop 1 Blood Transfusion Meeting And others</p>

3-3 Evaluation Grid

In order to conduct evaluation by five criteria, evaluation grid was developed on each evaluation criterion.

On relevance, Super Goal, Overall Goal, Project Purpose and Project Design were set up as evaluation points. Points to be reviewed and results of questionnaire were also described in the grid.

Evaluation Grid on Relevance is shown in Table 3-3-1.

On effectiveness, degree of the project purpose achievement was set up as an evaluation point. Points to be reviewed and results of questionnaire were described in the grid.

Evaluation Grid on Effectiveness is shown in Table 3-3-2.

On efficiency, appropriateness of inputs was set up as an evaluation point. Points to be reviewed and results of questionnaire were described in the grid.

Evaluation Grid on Efficiency is shown in Table 3-3-3.

On impact, impact on Project Purpose level, impact on Overall Goal and Super Goal, unexpected positive impact and negative impact were set up as evaluation points. Points to be reviewed and results of questionnaire were described in the grid.

Evaluation Grid on Impact is shown in Table 3-3-4.

On sustainability, continuous policy support and implementation organization were set up as evaluation points. Points to be reviewed and results of questionnaire were described in the grid.

Evaluation Grid on Sustainability is shown in Table 3-3-5.

Table 3-3-1 Evaluation Grid on Relevance

	Evaluation Point		Points to be reviewed		Result of Questionnaire
1.1	Relevance of Super Goal	1.1	Super Goal is consistent with MOH policy ?	1.1	MCH is first priority of Cambodia as shown in SEDP2.
1.2	Relevance of Overall Goal	1.2	Overall Goal is consistent with MOH policy ?	1.2	MCH is first priority of Cambodia as shown in SEDP2.
1.3	Relevance of Project Purpose	1.3.1	Project Purpose is consistent with MOH strategy and Target Group need ?	1.3.1	Health Workforce Development Plan in 1999 is still effective.
		1.3.2	Project Purpose as means of Overall Goal achievement is relevant ?	1.3.2	Yes
1.4	Relevance of Project Design	1.4.1	Cambodian needs changed after Project start ?	1.4.1	No
		1.4.2	Japanese know-how in MCH area is utilize ?	1.4.2	Yes
		1.4.3	Target Group selection is relevant ?	1.4.3	Yes It is difficult to survey Target Group conscious.
		1.4.4	Project Implementation Plan as means of Outputs achievement is relevant ?	1.4.4	Yes More activities are required. Some indicators will be modified.

Table 3-3-2 Evaluation Grid on Effectiveness

	Evaluation Point		Points to be reviewed		Result of Questionnaire
2.1	Degree of Project Purpose achievement	2.1.1	Project strengthen human resource development for improvement of MCH, including community health ?	2.1.1	Yes
		2.1.2	Project gives benefit to Target Group ?	2.1.2	Yes
		2.1.3	Project Purpose is achieved by Outputs ?	2.1.3	Yes
		2.1.4	Project Implementation contributes to Project Purpose and Output achievements ?	2.1.4	Yes

Table 3-3-3 Evaluation Grid on Efficiency

	Evaluation Point		Points to be reviewed		Result of Questionnaire
3.1	Appropriateness of Inputs	3.1.1	Expert Inputs are appropriate in terms of timing, period, number, field and level ?	3.1.1	Yes
		3.1.2	Material provision are appropriate in terms of timing, quality, quantity and level ?	3.1.2	Yes
		3.1.3	Input comparison with other donors ?	3.1.3	Dependence of NMCHC on JICA is about 5%, while dependence of similar projects is more than 10%. Absolute value might be compared.
		3.1.4	Cooperation degree from MOH, national hospitals, referral hospitals and health centers ?	3.1.4	Considering poor communication system and accessibility, cooperation degree is relatively high.

Table 3-3-4 Evaluation Grid on Impact

	Evaluation Point		Points to be reviewed		Result of Questionnaire
4.1	Impact on Project Purpose level	4.1	User fee system makes RHs and HCs healthy financial status.	4.1	Yes
4.2	Impact on Overall Goal and Super Goal	4.2	In case that Quality of service for MCH and Status of MCH in Cambodia are improved, what impact creates ?	4.2	Yes. Improvement is expected, but evaluation using indicators is difficult.
4.3	Unexpected Positive Impact	4.3	Project creates unexpected positive impact ?	4.3	Yes. Sex infection diseases might be reduced.
4.4	Negative Impact	4.4	Project creates negative impact ?	4.4	No. No negative impact was observed.

Table 3-3-5 Evaluation Grid on Sustainability

	Evaluation Point		Points to be reviewed		Result of Questionnaire
5.1	Continuos policy support	5.1	Political and budget support continue ?	5.1	Yes
5.2	Implementation Organization	5.2.1	Hospital management know-how is absorbed and utilized ?	5.2.1	Yes, but some assistance is still necessary.
		5.2.2	MCH skill including clinical and nursing care is maintained and improved ?	5.2.2	Yes, but skill maintenance requires training, lecture, practice as well as drug and material. Most of counterparts suggest continuos support and assistance.
		5.2.3	Medical facility is well maintained ?	5.2.3	Corrective maintenance is standardized. Preventivemaintenance is further assisted and supported and trained.
		5.2.4	Accounting system including user fee system is managed stably ?	5.2.4	Financial condition of NMCHC is stable. Only 5% of income is received as aid.
		5.2.5	Human resource assignment continues ?	5.2.5	No comment
		5.2.6	Staff, who receives training, remain NMCHC and other public sectors ?	5.2.6	Half of questioned CP are not satisfied in their income.
		5.2.7	Training system and training output are maintained and expanded.	5.2.7	Yes, but TOT should be further strengthened.

4. EVALUATION BY FIVE CRITERIA

This mid-term evaluation was applied to five criteria of Relevance, Effectiveness, Efficiency, Impact and Sustainability.

Evaluation grid on each criterion was prepared, and results from interview and questionnaire were entered on the grid by the evaluation team.

Two workshops attended by the Team and the Project team were held utilizing the grid.

The workshop 1 on the mid-term evaluation is summarized in ANNEX 3.

The workshop 2 on the mid-term evaluation is summarized in ANNEX 4.

Through the literature survey, interview with related people, written Q&A, actual performance indicators, two workshops as well as a referral hospital, a health center and an operational district visits, the both teams jointly assessed the result of mid-term evaluation of the project as described below.

- The Project is relevant to Cambodian needs and policy as well as Japanese assistance policy:

According to MOH Health Sector Strategic Plan 2003-2007 issued on August 2002, MCH health program is stated as priority health programs.

It can be said that the Cambodian Government Policy regarding to MCH is not changed, and The Cambodian needs regarding to MCH is still high.

- The project is effective in achievement of the purpose and outputs as well as the overall goal and the super goal:

According to interview results and questionnaire & answer, most results say that human resource development is strengthening.

In the two workshops, it can be said that the training system is established and the training cycle of “needs assessment-preparation-practice-monitoring-evaluation” is functioning.

Hospital management capabilities are also strengthened, since the technical bureau properly manages and analyzes various hospital information including activities implemented in NMCHC.

The actual performance indicator shows that Number of Ante-natal care at HC with MW trained in the Project is increased.

- The Project is efficiently conducted:

As shown in the actual performance indicator, more than 500 NMCHC and provincial staffs were trained, and number of births attended by trained RH MW become 1.5/month (Median) before to 6.0/month after the training respectively.

Number on Ante-natal care at HC with trained MW is Median 10/month before to 32/month after training.

NMNCHC as a training center is strengthening.

- The Project maybe develop positive impact:

Through the hospital management seminar, importance of hospital management is recognized and transmitted to MOH and other hospitals.

- The positive effects of the Project will be sustained:

From view points of factors subject to outside such as political and budgetary support as well as important assumption, sustainability is highly expected.

Budgetary support from the Government of Cambodia is indispensable to achieve higher sustainability.

5 Recommendations

5-1 Contribution to the health policy

It is concluded that the NMCHC's function as a top referral hospital and as a national training center is strengthened. Training activities for provincial health staffs are also progressed.

Now, the Project is entering the next stage to cooperate and collaborate with MOH more closely in order to achieve overall goal and super goal of the Project. Therefore, more communication between the Project and MOH is recommended.

Also, collaboration with National Programs is recommended to expand its training system and know-how all over the country, and to contribute to further improvement of human resource development.

The outcome of the Project should contribute more to the health policy of Ministry of Health.

5-2 Continuation of training activity

The Project successfully established the training system which has series of training cycle including needs assessment, preparation, implementation, monitoring, evaluation, and supervision. The training system functions in a good way.

Thus, it is recommended to continue training activities as ever, and to expand training fields from doctors and midwives to co-medical level such as laboratory technology, hospital facility maintenance, and so on in the future to produce more effects in local MCH services.

5-3 Training budget

Sustainability through the ownership is very important. JICA always respect this principle. The Project has tried to share the cost with Cambodian side since the beginning of the second phase. This year, the national budget (PAP budget) can be used for training, and it brought big impact on the Project. The team highly appreciates Cambodian government for the continuous support to share training budget for the future sustainability.

5-4 Collaboration with MOH on hospital facility management

Through the Project activities, NMCHC Medical Engineering Units strengthen its capacity of implementing equipment maintenance services not only for NMCHC, but also for other national hospitals and referral hospitals in Cambodia. NMCHC Medical Engineering Units plays a leading role for facility management implementation, and functions as National Workshop now.

It is important to maintain equipment and facilities in good condition to improve MCH services. Therefore, outcome of the Project should be promoted more actively by close collaboration with MOH. It is suggested that a Japanese expert of the Project should have counterparts and a working space in MOH.

5-5 Revision of PDM1

As the Project activities have progressed and been specified, PDM1 needs to be rearranged to suit to the real situation of the Project. Therefore, PDM2 was developed in accordance with the current activities by the Project.

In the process of evaluation, the Team confirmed that PDM2 reflects present situation of the Project appropriately, and is suitable for a management tool of the Project for the remaining period.

Therefore, it is recommended to utilize PDM2 and to implement activities based on PDM2.

FY	FY 2 0 0 0												FY 2 0 0 1												FY 2 0 0 2												FY 2 0 0 3												FY 2 0 0 4																							
	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3												
Long-term Experts	Noriko FUJITA (Chief Advisor)																																																																							
	7/3												10/1												12/2												Kazuhiro KAKIMOTO(Chief Advisor)												9/30																							
	Kay SUZUKI (Coordinator)												4/13												Kinuko SAITO (Coordinator)												6/30												Izumi SUZUMORI (Coordinator)												5/31											
	4/1												3/22												6/1												6/1												5/31																							
	Mitsuaki MATSUI (OBGY)												6/24												Hiromi OBARA (OBGY)												6/9																																			
	6/25												6/10																																																											
	Mari MORIKANE (Midwifery Nursing)												10/31												Satomi NAITO (Midwifery Nursing)												3/31												Mayumi HASHIMOTO (Midwifery Nursing)												9/19											
	4/1												10/17												3/20																																															
	Shoichi SHIMIZU (Medical Equipment)																																																3/31																							
	4/1																																																																							
Yoshiko KUDO (Clinical Laboratory)												7/1												Mika HORIE (Clinical Laboratory)												10/8												Yasuo MORIKAWA (Clinical Laboratory)												10/7												
4/1												6/15												6/14																																																
Short-term Experts	Tadashi KASAI (Facility mgt.) 6/4-12/3												Yoshiko FUJIWARA (Hos. Info. Mgt.) 4/1-8/29												Akinobu NEMOTO (Medical Info. Mgt.) 5/28-8/9																																															
	Satsuki HONDA (Nursing mgt.) 7/3-9/2												Yuta UCHIYAMA (Hos. Phrm. mgt.) 4/18-9/29												Kazuhiro KAKIMOTO (HIV) 6/10-7/4																																															
	Takao SUGIMOTO (Hos. Mgt.) 9/9-9/24												Takao SUGIMOTO (Hos. Mgt.) 7/25-8/18												Hironori OKABAYASHI (Pediatric) 8/1-11/16																																															
	Naoko FUJITA (D&M mgt.) 8/15-11/26												Yoshimasa KASUGA (OBGY) 8/5-8/18												Toshiko Glover (HR Training) 8/2-9/5																																															
	Kazuhiro KAKIMOTO (Health edu.) 1/10-1/27												Mayumi HASHIMOTO (Infection contr.) 8/14-8/7												Miho HASEGAWA (Edu. Training) 8/2-9/5																																															
	Kazumi TAKI (Anesthesiology) 1/21-2/8												Akira ASANO (Operation mgt.) 9/6-10/3												Takao SUGIMOTO (Hos. Mgt.) 8/10-8/25																																															
	Syuzo KANAGAWA (Pediatric) 1/22-2/13												Kazuhiro KAKIMOTO (HIV) 10/2-12/27												Nami OIKAWA (Pediatric Nura.) 9/1-9/25																																															
	Miki SAKAGUCHI (HIV) 2/12-3/10												Kazumi TAKI (Anesthesiology) 11/25-12/14												Yoshimasa KASUGA (Operation mgt.) 9/15-9/29																																															
	Kanehiro HASUO (Diagnostic radiology) 2/14-2/28												Syuzo KANAGAWA (Pediatric) 1/27-1/18												Kazumi TAKI (Anesthesiology)																																															
	Yuzo SASAKI (Radiology) 2/14-3/12												Takeshi FUKUCHI (Edu. Training) 12/16-12/22												Satomi NAITO (Nursing Edu.)																																															
												Motofumi OKADA (Blood Transf. mgt.) 1/14-1/25												Motofumi OKADA (Blood Transf. mgt.)																																																
												Harumi IWASHITA (Health Training) 2/8-3/17												Yuta UCHIYAMA (Hos. Phrm. mgt.) 12/22-3/23																																																
												Toshiko Glover (HR Training) 2/22-3/2																																																												
												Dr. S.F. Jamaluddin (Emergency Medical Care) 8/13-8/17																																																												
												Dr. M.H. Abdullah (Emergency Medical care) 8/13-8/17																																																												
												Dr. TE Emavardhana (AIDS Counseling) 10/22-10/27																																																												
Provided Equipment	○ 11,356,000yen												○ 6,840,000yen												○ 5,081,000yen																																															
	△ 6,788,000yen												△ 3,694,000yen												△ 3,972,000yen																																															
	Xray film developing machine etc												Spare parts etc												Transformer, microscope																																															
Accompanied Equipment	○ 1,806,000yen												○ 3,176,000yen																																																											
	△ 261,000yen												0																																																											

○ Purchased in Cambodia

△ Purchased in Japan

Provision Equipment from FY2000

FY	No.	Description	Company	Type	Price	No. of provision	No. of disposal	Exsistent No.	Utiliza tion	Manag ement	Storage
FY2000	T00-001	Xray Film Auto Processor	ELK	ECOMAT21	\$14,621.00	1	0	1	A	A	Radiology
FY2000	T00-002	Automatic Film Feeder with	ELK	ECOMAT21	\$3,714.29	1	0	1	A	A	Radiology
FY2000	T00-003	Water Filter	ELK	ECOMAT21	\$25.00	1	0	1	A	A	Radiology
FY2000	T00-004	UPS	Chloride	Power Lan/ 3000VA	\$1,370.00	1	0	1	A	A	Radiology
FY2000	T00-005	Vertical Bucky Unit with Grid	Medison	VB for Medical Xray Apparatus	\$7,126.05	1	0	1	A	A	Radiology
FY2000	T00-006	Xray Monitor	Toshiba	BE1298AO for Medical Xray Apparatus	\$1,235.29	1	0	1	A	A	Radiology
FY2000	T00-007	Image Intensifier	Toshiba	E5764HV-PI for Medical Xray Appratus	\$22,692.00	1	0	1	A	A	Radiology
FY2000	T00-008	Hermatocrit Centrifuge	Kubota	3100	¥255,000	1	0	1	A	A	Clinical Laboratory
FY2000	T00-009	Shipper Unit	SHIMAZU	TSU-1200	\$5,638.66	1	0	1	A	A	Clinical Laboratory
FY2000	T00-010	Ultrasonic Scanner Probe	FUKUDA	FUT-LM381-75A		1	0	1	C	A	Project Office
FY2000	T00-011	Surgical Instruments and Curettage operating setset	Matsuyoshi	Operating scissors, forceps etc.	\$21,522.21	1	0	1	A	A	Operation Room
FY2000	T00-013	Laboratory Microscope	Olympus	BX-40	\$17,136.00	1set	0	1set	A	A	Clinical Laboratory
FY2000	T00-014	Colour Video Camera	JVC	TK-C1380		1	0	1	A	A	Clinical Laboratory
FY2000	T00-015	AC Adopter	JVC	AA-P700		1	0	1	A	A	Clinical Laboratory
FY2000	T00-016	Colour Video Monitor	Olympus	OEV203	\$4,853.00		0	1	A	A	Clinical Laboratory
FY2000	T00-017	Projection lamp	Olympus	BX-40	\$220.00	11	0	11	A	A	Clinical Laboratory
FY2000	T00-018	Books, AV materials	Kinokuniya		\$3,166.79	52	0	52	A	A	Library
FY2000	T00-019	Xray Tube Unit	Acoma	KXR6-150	\$7,681.48	1	0	1	A	A	Radiology
FY2000	T00-020	Xray Tube Unit	Acoma	MBA-200	\$6,637.04	1	0	1	A	A	Radiology
FY2001	T01-001	Ultrasonic Scanner Probe	FUKUDA	UF-5000: Ultrasonic Diagnostisic Equipment	\$5,760.00	2	0	2	A	A	Radiology
FY2001	T01-002	Ultrasonic Scanner Probe	FUKUDA	UF-5500: Ultrasonic Diagnostic Equipment	\$4,100.00	1	0	1	A	A	Echo
FY2001	T01-003	Ultrasonic Probe	FUKUDA	FUT-CM601		1	0	1	C	A	OT
FY2001	T01-004	Spare parts of Patient Monitor	FUKUDA	DS-2120 Cuff for Adult 12cm and Air hose	\$10,574.70	1	0	1	C	A	Clinical Laboratory
FY2001	T01-005	Blood Shaker/Flow and Weight	Sebra	Model1040		1set	0	1set	A	A	Clinical Laboratory

FY2001	T01-006	Copy Machine	CANON	Sorter 20Bin NP6241	\$1,495.00	1	0	1	A	A	Project Office
FY2001	T01-007	Copy Paper stocker	CANON	Paper Deck Pedestral NP6241	\$1,450.00	1	0	1	A	A	Project Office
FY2001	T01-008	Paper Shredder	DINO	Paper Shredder M size	\$290.00	1	0	1	A	A	Project Office
FY2001	T01-009	Micro Pipette	Finland	Blask, wash bottles, Flend tips etc.	\$2,168.77	1	0	1	A	A	Clinical Laboratory
FY2001	T01-010	Tube Sealer, Scale, manometer etc.	Telmo	Ac155, SDX2&8, FC-160, BWB-800	\$2,621.05	1	0	1	A	A	National Blood Bank
FY2001	T01-011	Model of Medical Dessection and Female Figure Model	Sakamoto Model	S144 H46 x W30 x D20 (cm) &G130.11009	\$4,172.98	1	0	1	B	A	TOT
FY2001	T01-012	Vaccum Extractor for Maternity	Asashi	Vaccum Extractor No. 103		1	0	1	A	A	Gynecology
FY2001	T01-013	Rubber Cap for Suction Bottle	Asashi	Vacuum Extractor No.103	\$172.00	5	0	5	A	A	Gynecology
FY2001	T01-014	Rubber Cap for Suction Bottle	Asashi	Vacuum Extractor No.103	\$144.00	5	0	5	A	A	Gynecology
FY2001	T01-015	Suction Bottle	Asashi	Vacuum Extractor No.103	\$52.00	1	0	1	A	A	Gynecology
FY2001	T01-016	Trap Bottle	Asashi	Vacuum Extractor No.103	\$28.80	1	0	1	A	A	Gynecology
FY2001	T01-017	Regular Gauge	Asashi	Vacuum Extractor No.103	\$57.60	1	0	1	A	A	Gynecology
FY2001	T01-018	Suction Bottle	Asashi	Suction Unit, Mobile No.101N Suction Bottle: 3LV-101N	\$168.00	1	0	1	A	A	Gynecology
FY2001	T01-019	Rubber Cap for Suction Bottle	Asashi	Suction Unit, Mobile No.101N	\$115.20	2	0	2	A	A	Gynecology
FY2001	T01-020	Suction Bottle	Asashi	Suction Unit, Mobile No.101N Suction Bottle: CAP-3L	\$116.00	1	0	1	A	A	Gynecology
FY2001	T01-021	Rubber Cap for Suction Bottle	Asashi	Suction Unit, Mobile No.101N	\$115.20	2	0	2	A	A	Gynecology
FY2001	T01-022	Regular Valve	Asashi	Suction Unit, Mobile No.101N	\$147.20	2	0	2	A	A	Gynecology
FY2001	T01-023	Regular Gauge	Asashi	Suction Unit	\$57.60	1	0	1	A	A	Gynecology
FY2001	T01-024	Oxygen Sensor	AIKA	Anaesthesia Apparatus AIKA SAFER-100	\$1,848.00	3	0	3	C	A	Operation Room
FY2001	T01-025	Face Mask(L size)	AIKA	Anaesthesia Apparatus AIKA SAFER-100	\$533.30	10	0	10	C	A	Operation Room
FY2001	T01-026	TCV Vabolizer	AIKA	Anaesthesia Apparatus AIKA SAFER-100 TCV-1	\$2,328.57	1	0	1	C	A	Operation Room
FY2001	T01-027	Air Turvine Hand Pieace	J MORITA	TU-85N Air Turbine Hand Pieace: Astron Mini	\$426.67	1	0	1	A	A	Dentist
FY2001	T01-028	Cartridge Rotor for Air	J MORITA	TU-85N Cartridge Rotor for Air Turbine	\$970.37	5	0	5	C	A	Dentist
FY2001	T01-029	Spare parts of Transducer	Toitsu	MT-325 Fetal Monitor	\$1,308.27	1	0	1	C	A	OPD
FY2001	T01-030	Doppler Transducer of Fetal Actocardiograph	Toitsu	MT-332 Doppler Transducer: USD	\$1,933.34	2	0	2	C	A	OPD
FY2001	T01-031	Recording Pen of Fetal Actocardiograph	Toitsu	MT-332 Recording Pen: FHR	\$651.85	5	0	5	C	A	OPD

FY2001	T01-032	Doppler Transducer of Fetal Actocardiograph	Toitsu	MT-332 External UC Transducer:EXT UC	\$1,933.34	2	0	2	C	A	OPD
FY2001	T01-033	Recording Pen of Fetal Actocardiograph	Toitsu	MT-332 Recording Pen:UC	\$651.85	5	0	5	C	A	OPD
FY2001	T01-034	Rubber Door Packing of High Pressure Steam Sterilizer	HILLSON	330 MARK-III Rubber Door Packing	\$108.56	2	0	2	C	A	CSSD
FY2001	T01-035	Hepa Filter	HILLSON	330 MARK-III Hepa-Filter	\$362.85	5	0	5	C	A	CSSD
FY2001	T01-036	UV-Lamp	HILLSON	330 MARK-III UV-Lamp: GL-10	\$176.20	5	0	5	C	A	CSSD
FY2001	T01-037	Drainage Filter	HILLSON	330 MARK-III Drain Filter		10	0	10	C	A	CSSD
FY2001	T01-038	Stop Valve Set	Udono	KRECA-559V/RC	\$347.78	5	0	5	C	A	CSSD
FY2001	T01-039	Iris AccessPort Cover of Infant incubator	Nakamura	H-1000DPS		20	0	20	C	A	NCU
FY2001	T01-040	Electret Air Filter	Nakamura	H-1000DPS	\$1,911.11	100	0	100	C	A	NCU
FY2001	T01-041	Halogen Lamp	ERMA	ARMAX-1	\$75.00	5	0	5	C	A	Operation Room
FY2001	T01-042	Halogen Lamp	YAMADA	U-6360	\$9,466.67	180	0	180	C	A	Operation Room
FY2001	T01-043	Lamp for Phototherapy	Nakamura	PT-1600	\$326.40	40	0	40	C	A	NCU
FY2001	T01-044	Starter	Nakamura	PT-1600	\$50.37	40	0	40	C	A	NCU
FY2001	T01-045	UV-Lamp	TOYODA	TSS-1506RP:Scrub Station	\$11,520.00	100	0	100	C	A	OT
FY2001	T01-046	Fluorescent lamp	TOYODA	TSS-1506RP:Scrub Station	\$144.00	30	0	30	C	A	OT
FY2001	T01-047	Starter	TOYODA	TSS-1506RP:Scrub Station	\$36.00	30	0	30	C	A	OT
FY2001	T01-048	Power Switch	TOYODA	TSS-1506RP:Scrub Station	\$96.00	5	0	5	C	A	OT
FY2001	T01-049	UV-Lamp	TOYODA	TSS-802SU:Scrub Unit	\$2,760.00	15	0	15	C	A	Delivery
FY2001	T01-050	Starter	TOYODA	TSS-802SU:Scrub Unit		20	0	20	C	A	Delivery
FY2001	T01-051	Halogen Lamp	SHIMAZU	Spectrophotometer UV-1201 WI	\$144.44	5	0	5	C	A	Clinical Laboratory
FY2001	T01-052	D2 lamp	SHIMAZU	Spectrophotometer UV-1201	\$2,605.00	5	0	5	C	A	Clinical Laboratory
FY2001	T01-053	Wire Connection of Coagulator	EMC	Coagulator 397MS57	\$59.50	2	0	2	C	A	OPD
FY2001	T01-054	Aluminum Rigid Plate of Coagulator	EMC	Coagulator 397MS57		2	0	2	C	A	OPD
FY2001	T01-055	Wiring for Plate of Coagulator	EMC	Coagulator 397MS57	\$75.40	2	0	2	C	A	OPD
FY2001	T01-056	Electrode set of Coagulator	EMC	Coagulator 397MS57	\$72.66	2	0	2	C	A	OPD
FY2002	T02-001	Copy Machine	XEROX	Vivace455	\$860.00	1	0	1	A	A	TOT

Operational Expenses on Local Activities

Item/Year	FY2000	FY2001	FY2002
General	\$57,772.08	\$65,659.17	\$41,529.16
LLDC	\$6,740.00	\$15,543.22	\$32,283.05
Training of Middle-Level Manpower	\$12,161.81	\$11,922.16	
Local Adaptation	\$2,862.92	\$17,239.89	
Local Adaptation for Facility	\$59,700.00	\$0.00	
Total Amount	\$139,236.81	\$110,364.44	\$73,812.21

*Status up to the 2nd quarter only in FY2002

Field	FY C/P	Allocation of CP				
		FY2000	FY2001	FY2002	FY2003	FY2004
		4 7 1 0 1	4 7 1 0 1	4 7 1 0 1	4 7 1 0 1	4 7 1 0 1
Director	Dr. Koum Kanal					
OBGY Neo Anes	Dr. San Chan Soeun					
	Dr. Tan Vouch Chheng					
	Dr. Tiv Say					
	Dr. You Sophat					
	Dr. Tan Borin					
	Dr. Lao Suntareth					
	Dr. Keth Ly Sotha					
Midwife	Ms Ching Chan Tach					
	Ms Ou Saroeun					
	Ms Thai Leng Chou					
Clin. Labo	Mr. Ly Sovann					
TOT	Dr. Or Sivarin					
Account	Mr. So Sokphy					
Equip.	Mr. Huot Khom					

Budget Plan and Sharing Costs for Middle-Level Manpower Training <JICA Cambodia MCH Project MD/MW Training>

US\$1=¥120(Japanese Yen)

YEAR	ITEM	TOTAL	CAMBODIAN SIDE	JAPANESE SIDE	SHARE OF JAPANESE SIDE
April 2000 ~ March 2001	1. Allowance	11,971	0	11,971	92.4%
	2. Teaching Material	191		191	
	3. Equipment	200	200	0	
	4. Others	800	800	0	
	SUB-TOTAL	US\$13,162 ¥1,579,440	US\$1,000 ¥120,000	US\$12,162 ¥1,459,440	
April 2001 ~ March 2002	1. Allowance	15,212	2,990	12,222	71.42%
	2. Teaching Material	265	265	0	
	3. Equipment	635	635	0	
	4. Others	1,000	1,000	0	
	SUB-TOTAL	US\$17,112 ¥2,053,440	US\$4,890 ¥586,800	US\$12,222 ¥1,466,640	
April 2002 ~ March 2003	1. Allowance	15,212	5,641	9,571	55.93%
	2. Teaching Material	265	265	0	
	3. Equipment	635	635	0	
	4. Others	1,000	1,000	0	
	SUB-TOTAL	US\$17,112 ¥2,053,440	US\$7,541 ¥904,920	US\$9,571 ¥1,148,520	
April 2003 ~ March 2004	1. Allowance	15,212	8,441	6,771	39.57%
	2. Teaching Material	265	265	0	
	3. Equipment	635	635	0	
	4. Others	1,000	1,000	0	
	SUB-TOTAL	US\$17,112 ¥2,053,440	US\$10,341 ¥1,240,920	US\$6,771 ¥812,520	
April 2004 ~ March 2005	1. Allowance	15,212	11,447	3,765	22.0%
	2. Teaching Material	265	265	0	
	3. Equipment	635	635	0	
	4. Others	1,000	1,000	0	
	SUB-TOTAL	US\$17,112 ¥2,053,440	US\$13,347 ¥1,601,640	US\$3,765 ¥451,800	
TOTAL		US\$81,610	US\$37,119	US\$44,491	54.52%

Project Design Matrix (PDM): The Phase II of the Maternal and Child Health Project in the Kingdom of Cambodia

Target group : Expecting and nursing mothers and children

Duration : April 1, 2000 to March 31, 2005

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
Super Goal The status of maternal and child health in the kingdom of Cambodia is improved	<ul style="list-style-type: none"> - Maternal Mortality Rate 	<ul style="list-style-type: none"> - National Health Statistics Report 	
Overall Goal Quality of service for maternal and child health in the Kingdom of Cambodia is improved.	<ul style="list-style-type: none"> - Percentage of births attended by trained health personnel in Cambodia - Ante-natal check-up rate in Cambodia - Return rate of Ante-natal Care - Return rate of for complicated postpartum cases - Neonatal death 	<ul style="list-style-type: none"> - National Health Statistics Report 	<ul style="list-style-type: none"> - Natural disasters will not occur in Cambodia - Accessibility will not be worth furthermore
Project Purpose Human resource development for the Improvement of MCH, including community health, is strengthened.	<ul style="list-style-type: none"> - Number of births attended by trainees (Drs & Mws) - Ante-natal care number by trainees (Drs & Mws) - Reputations/evaluation by external evaluators 	<ul style="list-style-type: none"> - Supervision & questionnaire - Supervision & questionnaire - External evaluation committee (including Cambodians and foreigners) - Interview 	<ul style="list-style-type: none"> - Continuous policy support from Ministry of Health
Outputs 1 The National Maternal and Child Health Center as the national top referral hospital and training center is further strengthened. 2 MCH capabilities of operational districts (referral hospitals and health centers) are improved 3 Collaboration between NMCHC and Department of Human Resources/ National hospitals/Operational districts (referral hospitals and health centers) in MCH is strengthened	1-1 Number of trainees (Drs, Mws, Health Care Managers) 1-2 Number of clients using NMCHC services 1-3 Number of deaths for perinatal illnesses 1-4 Drug and material consumption per patient in ordinary wards (except ICU/NCU) 1-5 Medical equipment/facility utilizing rate 1-6 Post operative infection rate 1-7 Number of paraclinic tests 2-1 Number of deliveries of referral hospitals 2-2 Number of deliveries attended by health center midwife trainee in NMCHC 2-3 Number of referral cases to referral hospitals 3-1 Number of referred complicated cases to NMCHC 3-2 Number of meetings and conferences with other hospitals (especially in Phnom Pen area)	1-1/ Technical Bureau Report and 1-2 Report of MOH 1-3 D/M Monthly Report and Technical Bureau Report 1-4 Engineering Section Report 1-5 Gynecology Maternity Report 1-6 Paraclinic Report 2-1 National Health Statistics Report 2-2 National Health Statistics Report and Supervision 2-3 National Health Statistics Report 3-1 Technical Bureau Report 3-2 Technical Bureau Report	<ul style="list-style-type: none"> - Ministry of Health provides Drug /Materials properly

Note: This matrix is formulated tentatively on the assumption that the necessary budget will be acquired by both sides and is subject to change within the framework of Record of Discussions when the necessity arises in the course of implementation.

PDM-1-1

ANNEX 2

Narrative Summary	Inputs		Important Assumptions
<p>Activities</p> <p>1 (Activities for strengthening of NMCHC) 1-1 Reorganize training division in NMCHC 1-2 Improve general management by sufficient use management cycle 1-3 Revise job description 1-4 Train staff for accounting skills / knowledge 1-5 Establish system of appropriate drug and material management in hospital 1-6 Establish hospital maintenance system 1-7 Carry out training for communication among staff and patients 1-8 Provide Health education for patients/families 1-9 Standardize patient care 1-10 Strengthen in-service training 1-11 Introduce new paraclinic tests 1-12 Implement "Prevention of mother to child transmission of HIV" National program in NMCHC</p> <p>2 (Activities for improvement of capabilities of referral hospitals and health centers) 2-1 Make a plan for training including evaluation 2-2 Provide training for field staff 2-3 Perform supervision 2-4 Strengthen coordination for student training 2-5 Train health personnel for health promotion</p> <p>3 (Activities for collaboration) 3-1 Give feedback information to the field after supervision 3-2 Revise check lists manuals for supervision 3-3 Train supervisors 3-4 Establish regular meetings/conferences among hospitals 3-5 Cooperation with other hospitals for medical equipment maintenance and repair, and establish National Workshop in NMCHC</p>	<p>Japanese side</p> <p>1 Dispatch of experts (a)Long-term Chief advisor, Coordinator, Obstetrics and gynecology, Midwife, Maintenance expert of medical equipment, Clinical laboratory technologist,</p> <p>(a)Short-term Neonatologist, Anesthesiologist, Radiologist, Radiology technician, Hospital accounting expert, OT/NEO Nursing, Nursing management expert, Hospital management expert, Maintenance expert of hospital facility, Pharmacist, Health education/training expert, Hospital information expert, HIV/AIDS counselor</p> <p>2 Counterpart training Obstetrics and gynecology, Clinical laboratory technician, Hospital management and finance, Anesthesiologist, Radiologist/Technician, Hospital management, ICU nurse, OT nurse, Hospital accounting, Echographist, OPD nurse</p> <p>3 Provision of machinery and equipment</p> <p>4 Cost sharing for local</p>	<p>Cambodian side</p> <p>1 Assignment of counterparts</p> <p>2 Arrangement of buildings and facilities</p> <p>3 Sharing of expenses for project implementation</p>	<p>- NMCHC main staff who have received training remain in NMCHC</p> <hr/> <p>Pre-conditions</p>

Note: This matrix is formulated tentatively on the assumption that the necessary budget will be acquired by both sides and is subject to change within the framework of Record of Discussions when the necessity arises in the course of implementation.

**Mid-term Evaluation on Maternal and Child Health Project Phase 2
Program of Workshop 1**

- Date: October 2, 3, and 4, 2002
- Place: NMCHC
- Purpose of Workshop 1
 - 1) To share the achievement of JICA MCH Project Phase 2 among Stakeholders
 - 2) To prepare the mid-term evaluation of JICA MCH Project Phase 2
- Topics
 - 1) Improvement of Hospital Management (for PDM Output 1)
 - 2) Improvement of Training System as Training Center (for PDM Output 1)
 - 3) Improvement of Clinical and Nursing Care as Top Referral Hospital (for PDM Output 1)
 - 4) Training and Supervision activities for provinces (for PDM Output 2)
 - 5) Collaboration with MOH, other institutions, national program and donors (for PDM Output 3)
- General concerns on Workshop
 - 1) What have we done until now with JICA team ?
 - 2) What need to be done in the future to achive the goal of NMCHC as top referral hospital and training center
- Attendant from

NMCHC: Steering committee, Clinical committee, Nursing committee, Clinical Division, Nursing Division, Paraclinic, Engineering, TOT

Ministry of Health, Formar trainees, Battambang province, Blood Bank, TSMC

JICA: Experts and local staffs
- In Workshop, group discussion was held and presentation was carried out by each group with Q&A and comments
- Closing Remarks by Director General for Health, MOH, Cambodia
- Workshop 1 Result:
 - 1) Purposes were achieved.
 - 2) Evaluation on Workshop 1 itself was conducted by a moderator for reference.

*Attachment: List of attendee
Discussion summary from PCM workshop method*

Wednesday, October 2nd, 2002

Group 1 Hospital Management		
1	Tan Vuoch Chheng	Vice-Director of NMCHC
2	Huot Khom	Director of Administration Bureau, NMCHC
3	So Sokphy	Director of Accounting Bureau, NMCHC
4	Prak Savuth	Vice-Director of Administration Bureau, NMCHC
5	Seng Leng Huot	Chief of Paraclinic Division, NMCHC
6	Ouk Chantha	Chief of Gynecology Ward, NMCHC
7	Chun Nay Im	Chief of Pharmacy, NMCHC
8	Kroch Sary	Chief of NCU Ward, NMCHC
9	Chum Toma	Engineering Staff
10	Hub Sok Samnang	Engineering Staff

Group 2 Clinical /Nursing Care		
1	Lao Sunthareth	Director of Clinical Division, NMCHC
2	Po Chin Samuth	Chief of Delivery service, NMCHC
3	Prak Somaly	Director of Technical Bureau, NMCHC
4	Ou Saroeun	Chief of Maternity, NMCHC
5	Cheng Sokhala	Chief of Maternity ward, NMCHC
6	Ly Sovann	Chief of Laboratory, NMCHC
7	Kang Phannary	Vice Chief OPD, NMCHC
8	Tan Borin	Chief of NCU, NMCHC
9	Kem Vanna	Chief of CSSD, NMCHC
10	Svay Sary	?

Group 3 Clinical /Nursing Care		
1	Chin Chan Tach	Chief of Nursing Division, NMCHC
2	Ket ly Sotha	Chief of Maternity service, NMCHC
3	Thai Leang Chou	Chief of OPD, NMCHC
4	Ang Sareth	Chief of Delivery Ward, NMCHC
5	Srey Ponlok	Chief of OT Ward, NMCHC
6	Saing Sona	Vice Chief of ICU, NMCHC
7	Seang Sody	Vice Chief NCU, NMCHC
8	Dith Samon	Chief of ICU, NMCHC
9	Chey Phossana	Acting Director of TOT, NMCHC

Thursday, October 3, 2002

Group 1 Training System Collaboration at NMCHC		
1	Lao Sunthareth	Chief of Clinical Division, NMCHC
2	So Sokphy	Director of Accounting ,NMCHC
3	Prak Savuth	Vice Chief of Administration Bureau, NMCHC
4	Ou Saroeun	Chief of Maternity, NMCHC
5	Ouk Chantha	Chief of Gynecology Ward, NMCHC
6	Phy Radian	Bio Medical E.M of MoH
7	Chea Kim long	Director of Financial ,MoH
8	Tung Rathavy	Vice Chief of National Reproductive Health Program
9	Nhem Thouk	Director of National Blood Bank
10	Svay Sary	Staff of TOT, NMCHC
11	Ngo Sitty	Director Of RH Battambang
12	Noun Sothary	Midwife of Municipal Hospital

Group 2 Training System Collaboration for Province		
1	Ket ly sotha	Chief of Maternity service ,NMCHC
2	Chin Chan Tach	Chief of Nursing Division ,NMCHC
3	Hou Khom	Chief of Administration Bureau ,NMCHC
4	Prak Somaly	Director of Technical Bureau ,NMCHC
5	Po Chin Samuth	Chief of Delivery service ,NMCHC
6	Thai Leang CHou	Chief of OPD ,NMCHC
7	Chun Long	Chief of National Reproductive Health Program
8	Sok Chan	MoH /Laboratory
9	Oung Sokhan	Director of Phnom Penh Municipality Hospital
10	Kuy Sok	Director of Battambang
11	Chey Phossana	Acting Director of TOT, NMCHC
12	Svay Sary	

Discussion Summary on Workshop 1

Past	Future	Comments
Discussion Item: Hospital management		
1. Financial		
Elected HFC	HFC request MOH for revision of tender regulation (user fee guidelines)	
HFC prepare D&M procurement flow, prepare and conduct tender, inspect D&M	Need to increase the use of national budget	
Controler exempt poor patient	Procurement of spare parts (facility and ME) by national budget	
	D&M committee strengthen communication among pharmacy and accounting	
	D&M strengthen flow of regular supply	
2. Drug and Material		
Chief ward make a plan form services	Control consumption at ward	
D&M Committee make 3month procurement plan	Make consumption report	
Pharmacy start data base		
Prepare store for pharmacy		
3. Personnel		
Developed job description	Finish job description for manager, team leader	
Conducted general meeting, routine meeting	make clear strategy for punishment/award	
Done rotation of chief	Strengthen regulation for attendance	
Made orientation by administration	Conduct HRT	
Started contract after training	Conduct functional analysis	
4. Engineering		
Held regular meeting and maintenance time table of medical materials was followed.	Strengthen ME management by data base	
Report monthly for electricity, water, and gas consumption at NMCHC	Strengthen monthly engineering meeting	
Strengthened the grasp of spare parts and equipment stock	Strengthen engineering workshop activities	
Produced guidelines for maintenance and safety management	Procurement of spare parts (facility and ME) by user fee and national budget	
Strengthened facility maintenance		
NMCHC workshop become national workshop and started external services	National training for technical and management	

Discussion Summary on Workshop 1

Start cooperation with MOH, provincaill staff for ME	Have engineering center	
Conducted seminar on ME management	Have contribution of expert on ME	
5. Information		
Communication among MOH/RH/OD/HC was strengthened		
Produce annual report of NMCHC		
Patient satisfaction study was conducted		
Information of paraclinic activities was distributed in NMCHC		
6. Training		
Conduct TOT for NMCHC	Conduct breast feeding traing for NMCHC staff	receive oversea training
Staff received training (drug abuse training, infection control, HRT, breast feeding, ME user training, management, computer, english,)	Revise infection controlk manual and check list	
Use check list for supivesion after training (NMCHC MW)	Establish lactation clinic for health education to the mothers	
Conducted MW training for HC/RH	Conduct echo staff traninig	
Conduct health educaiton about PMTGT		
Conduct supervision for selected provinces		

Discussion Item: Clinical & Nursing care

Conduct in service training for nursing care, made and used check list for monitoring	Strengthen training for NMCHC staff by training (clinical and nursing care, HRT,	CTG training for NMCHC staff
Conduct in service training for junior doctors		Need more modern material new technique for operation
PMTCT activities started at NMCHC (develop couselfing curriculum, conduct traing for counselors, provide information to mothers at MC, try to reduce descrimination, encourage husband to attend MC and VGT	Strengthen PMTCT activities to other proovinces by collaboration with NGO and counterparts	
PMTCT program expand to Battambang thorough NMCHC collaboration (counseling and labo testing training to BB province)		

Discussion Summary on Workshop 1

Start infection control committee, produce protocol curriculum and conduct training for all staff at NMCHC, monitor with check list	Continue infection control activities (monitoring,	
Standardize patient care (Mg, oxytocine, cytotec)	Standardize more protocols (antibiotics, cytotec in PROM, post ope care, abortion)	
Produce handout for emregency obstetric care	Revise manuals and guidelines for nursing care	
Hand over at ICU started and continued	Continue handover	
Blood transfusion committee start its activities		
Start newborn and infant follow up (at Maternity and OPD)	Continue follow up collaborating with NPH	
Conduct TOT for tutor (Dr/MW)	Continue TOT(Dr/NS)	
Improved laboratory activities (increase items, make QC, new report form)	Set up PAP	Extend services of labo, X ray, ECG
Provide health education to patient.family (Antenatal & postpartum)	Continue health education (breast feeding, nutrition and BS)	
	Make orientation and education for discharged women	
Implement student training (medical and labo)	Strengthen and extent clinical practice to the student	
Rotation system (Dr/Ns Chief, OB/NCU/ICU Dr)		
Make job descriton (nursing	Continue and strengthen discipline and regulation	Staff needs motivation
	Strengthen communication between clinical and nursing division	
Strengthened patient document management	Standrdize diagnosis, fill in, and central management of document and utilize patient data	
Conduct trainig for MW/DR in RH/HC and conduct supervision	Continue training and supervision for whole country	
Desimminate care standard through workshop or provincial Dr training		
Continue MD/MA meeting with participants from other hospitals		
Received training abroad (NMCHC staff provincial	Continue training abroad	

Discussion Item: Training system in NMCHC

Discussion Summary on Workshop 1

Training system established (preparation including budget and administrative management, needs assessment and selection of trainees, orientation for the trainees, clinical practice & lecture, tutorial system for practice, evaluation method during training, supervision after training)	Continue TOT, conduct preparation workshop for the training course, improve monitoring and evaluation system after training, conduct regular supervision	Motivate trainers in NMCHC
Conduct training for MW/Dr from RH/HC based on the training system	Set up budget for trainee and material needed	TOT needs training for training management
Conduct training (PMTCT, HRT, infection control, breast feeding, ME maintenance)	Conduct training for medical equipment maintenance for RH staff	
Conduct hearing for HC trainees	TSMC/RTC staff join the TOT and other training program at NMCHC	
	Make plan for inservice training for junior doctors	
Received medical student and CES (create task for medical student, provide lecture)	Establish student training management system (criteria for evaluation, morning meeting with medical student, practice for MW students,)	
	Clarify student training (discipline, evaluation method, TSMC needs feedback after student training	

Discussion Item: Training for provinces

Developed training tool (curriculum, handout, checklist during training and supervision) for MW/Dr at HC/RH and PMTCT	Continue training for MW/DR in HC/RH and PMTCT to other provinces	
Conduct training for MW/Dr at RH/HC and PMTCT(BB)	Conduct training for medical equipment maintenance for RH staff	
Increase the number of supervision after training for RH/HC and PMTCT in BB	More frequent supervision to PHD/OD by NMCHC	
Supervision provide feedback to and from PHD/OD , RH/HC and trainees		
Train health personnel for health promotion (counseling TOT and provide basic knowledge on HIV, infection control) to NMCHC and BB provincial staff	Breast feeding training together with PMTCT	
	IEC training for counselors	
	Need IEC materials for health education	

Discussion Summary on Workshop 1

Discussion Item: Collaboration		
1. MOH		
NMCHC made proposal of training/supervision/seminar for budget	Collaborate with MOH to conduct MW/DR training	Distribute MgSO4 and oxytocine to referral hospitals
MOH start to provide budgetary support	Continue budget support from MOH for training	Cooperate with HRD to select trainees at NMCHC
PMTCT follow MOH guideline		Information management system need improvement (record document and data base)
HRD considers proposal and submit to the top level for the final decision		
Participated in developing MW training curriculum		
2. National program		
Revise integrated check list for RH/HC with safemotherhood national program		
NMCHC participate brest feeding training for nutrition nationla program		
3. National center/hospital		
PMTCT collaborate with NCAHDS for implementation, and Sihanouk hospital for care network	Give information to the blood bank in case of difficulty	Provide feedback information when a patient was referred to NMCHC
Start discussion with blood bank and NMCHC for safety blood		
Invite physicians from other hospitals		
Activities of ME National Workshop covers national and provincial hospitals	Stregthen and develop National Workshop	
4. Faculty of medicine, TSMC		
received medical students and CES	Start 1 year MW course	
NMCHC staff participate seminar in Faculty of		
NMCHC professors teach at faculty of medicine		
5. PHD/OD, RH/HC		
PHD involved selection of trainees for MW/DR training course	Continue coordination with PHD/MOH for training and supervision	Distribute MgSO4 and oxytocine to referral hospitals
Received supervision after training of MW/DR form RH/HC, feedback from/to PHD/OD, and RH/HC	Continuous supeivision to PHD/OD, RH/HC with feed	Provide feedback information when a patient was referred to NMCHC
BB PHD collaborated for the implementation of	Conduct TOT for RH staff (MW/DR)	
6. NGO		
Supervise MW trainees after training	Colloborate NGO fo rgynecological activities	

Discussion Summary on Workshop 1

TBA kit provision and conduct hearing		
PMTCT work with NGO for care and support network		
7. International organization		
NMCHC received fund from UNIEF for MW training		
PMTCT collaborate with UNICEF and JICA for technical and financial support		

**Mid-term Evaluation on Maternal and Child Health Project Phase 2
Program of Workshop 2**

- Date: October 10 and 11, 2002
- Place: NMCHC
- Purpose of Workshop 2
 - 1) To evaluate the project at Mid-term
 - 2) To discuss PDM for remaining project period
- Evaluation and Discussion by 5 criteria
 - 1) Relevance
 - 2) Effectiveness
 - 3) Efficiency
 - 4) Impact
 - 5) Sustainability
- Attendant from
 - Cambodia side: Ministry of Health, National Reproduction Health Program, Technical School of Medical Care, Faculty of Medicine, Municipality Hospital, Blood Bank, NMCHC
 - JICA side: Mid-term evaluation team, Experts, local staffs, Cambodia office
- Closing Remarks by Director of NMCHC and Mid-term evaluation team sub-leader
- Workshop was held on presentations from Cambodia CP and Japanese expert
- Workshop 2 Result:
 - 1) Purposes were achieved.
 - 2) Results of Workshop 2 are fed back to Joint Evaluation Report

Attachment: List of attendee

Presentation material from CP

- *Activities of NMCHC as a top referral hospital*
- *Activities of NMCHC as a training center*
- *Activities of NMCHC for PMTCT*
- *Infection control activities at NMCHC*
- *Activities of NMCHC as a National workshop*

List of Attendee of Workshop October 10-11, 2002

No.	Name	Position
1	Ms Stharin Manisetha	Replacement of Ms Keat Phuong, HRD, MoH
2	Mr. Chea Kim Long	Director of Department of Finance, MoH
3	Dr. Sok Srun	Engineering Section, Department of Hospital Services, MoH
4	Ms Sok Khim	In-charge of Laboratory, MoH
5	Mr. Mitsutoshi Suzuki	JICA Evaluation Team
6	Dr. Seiki Tetano	JICA Evaluation Team
7	Ms Naoko Sagitani	JICA Evaluation Team
8	Prof. Koum Kanal	Director of NMCHC
9	Prof. Sann Chan Soeung	Vice-Director of NMCHC
10	Dr. Tan Vuoch Chheng	Vice-Director of NMCHC
11	Mr. Huot Khom	Director of Administration Bureau, NMCHC
12	Mr. So Sokphy	Director of Accounting Bureau, NMCHC
13	Dr. Prak Somaly	Vice-Director of Technical Bureau, NMCHC
14	Dr. Lao Sunthareth	Chief of Clinical Division, NMCHC
15	Dr. Ket Lysotha	Chief of Maternity Service, NMCHC
16	Mr. Prak Savuth	Vice-Director of Administration Bureau, NMCHC
17	Ms Ching Chan Tach	Director of Nursing division, NMCHC
18	Ms Ou Saroeun	Vice-Director of Nursing Division, NMCHC
19	Dr. Chhun Long	Chief of National Reproductive Health Program, NMCHC
20	Dr. Tung Rathavy	Vice-Chief of National Reproductive Health Program, NMCHC
21	Dr. Chey Phossana	Acting Director of TOT, NMCHC
22	Mr. Yusa	JICA Cambodia Office
23	Dr. Noriko Fujita	Chief Advisor, JICA MCH Project
24	Dr. Kazuhiro Kakimoto	Chief Advisor, JICA MCH Project
25	Ms Izumi Suzumori	Coordinator, JICA MCH Project
26	Dr. Hiromi Obara	Ob-Gy Expert, JICA MCH Project
27	Mr. Shoichi Shimizu	Medical Engineering Expert, JICA MCH Project
28	Ms Mayumi Hashimoto	Nursing Management Expert, JICA MCH Project
29	Dr. Hironori Okabayashi	Neonatology Expert, JICA MCH Project
30	Mr. Yasuo Morikawa	Technical Laboratory Expert, JICA MCH Project
31	Dr. Nhem Thuok	Chief of National Blood Transfusion Center
32	Dr. Than Thanasith	In-charge of Anapath, Faculty of Medicine
33	Dr. Uong Sokhan	Chief of Maternity, Municipality Hospital
34	Ms Chhin Khiev Maly	Replacement of Ms Chhim Pum, TSMC

សកម្មភាពក្នុងទិសដៅ មជ្ឈមណ្ឌលជាតិ គាំពារមាតានិងទារក

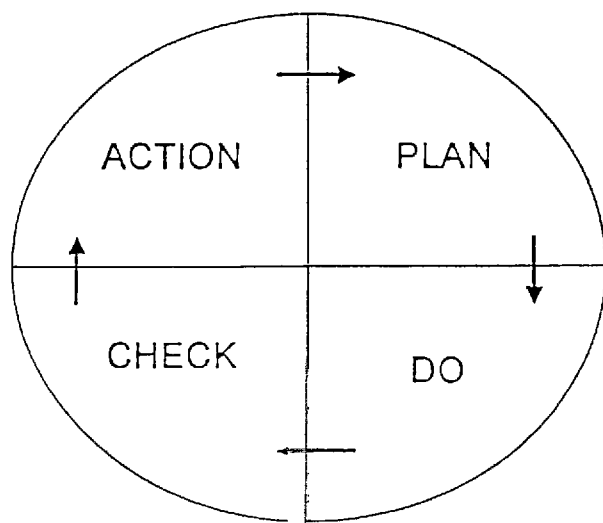
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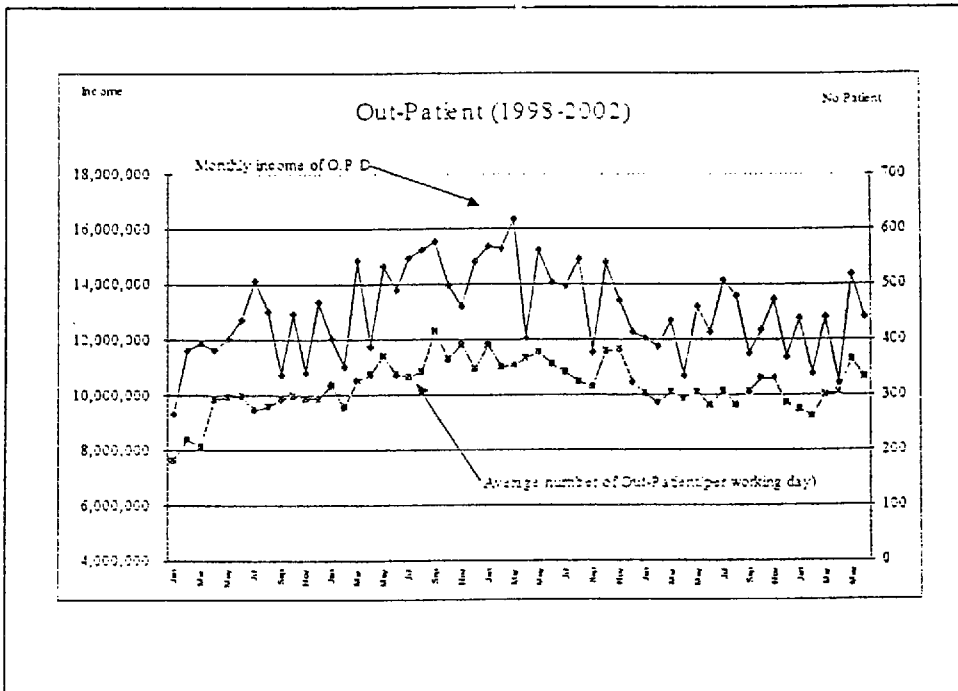
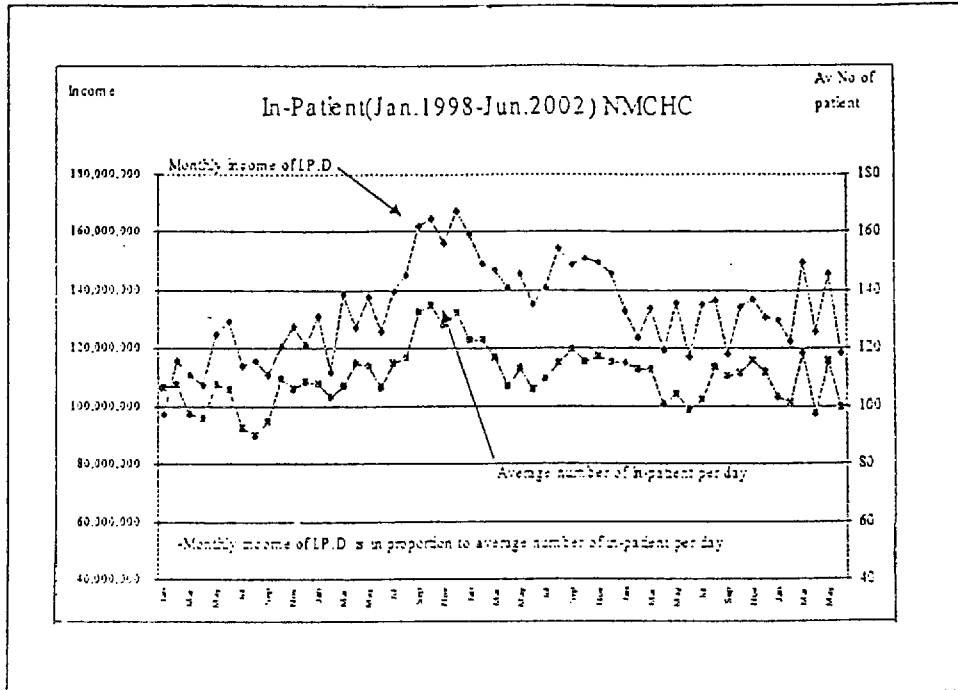
Activities of NMCHC as a top referral hospital

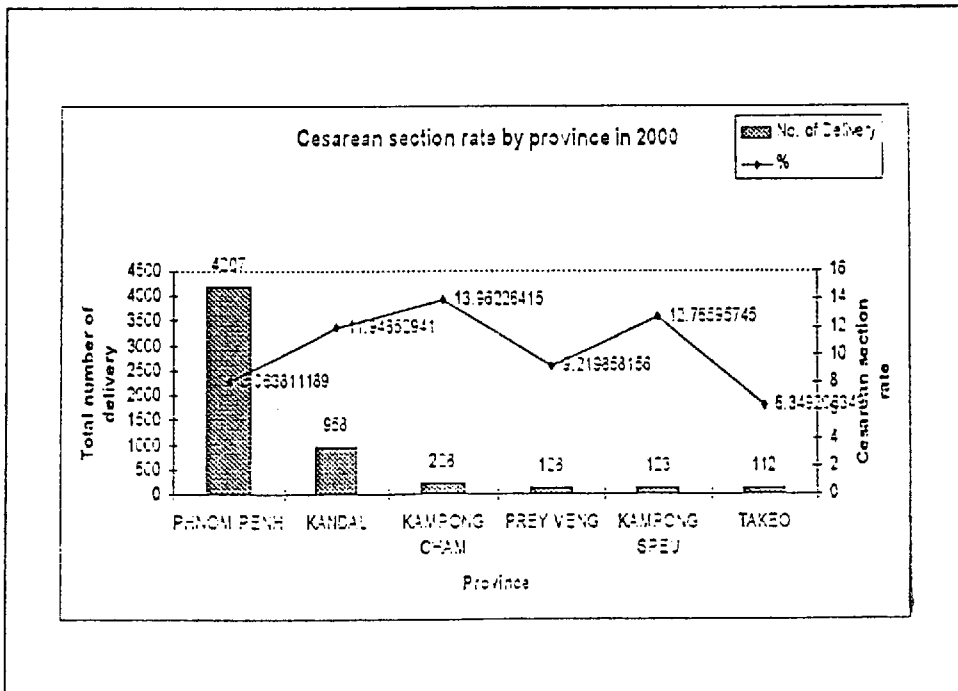
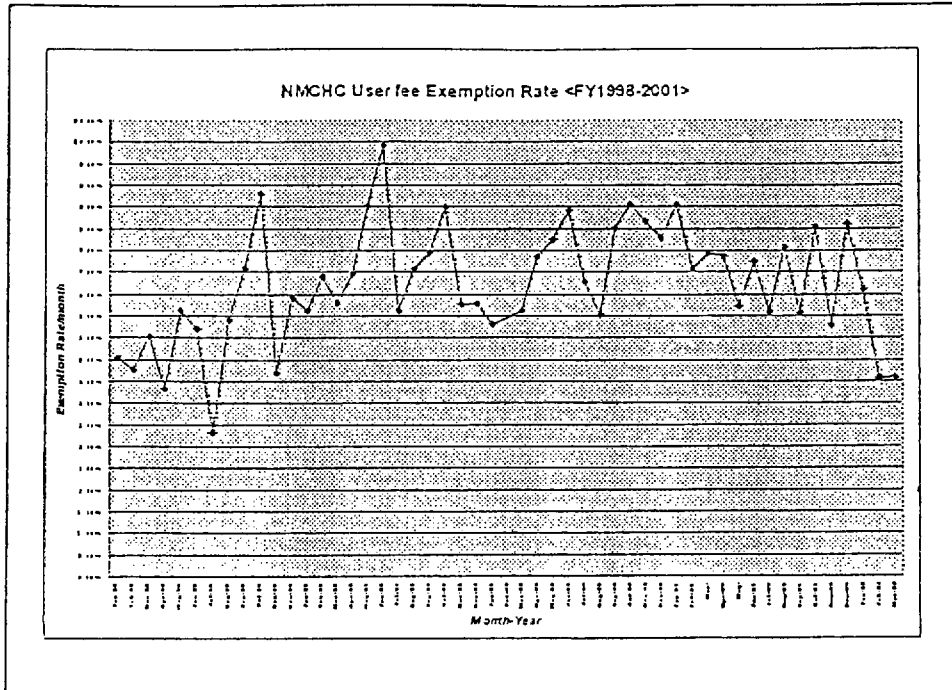
- ប្រើយ៉ាងគ្រប់គ្រាន់នូវវដ្តគ្រប់គ្រងជាទូទៅ
- Sufficient use management cycle
- ពិនិត្យឡើងវិញពីតួនាទីការងាររបស់បុគ្គលិក
- Revise job description
- បង្កើតអោយមានប្រព័ន្ធគ្រប់គ្រងឱសថនិងបរិក្ខារពេទ្យ
- Establish D&M management system
- បណ្តុះបណ្តាលផ្នែកគណនេយ្យ
- Accounting training
- ធ្វើស្តង់ដារការងារសេវាថែទាំ
- Standardize care

- ដាក់អោយមានតេស្តអមគ្លីនិកថ្មីៗថែមទៀត
- Introduce new paraclinic tests
- ធ្វើអោយមានការបណ្តុះបណ្តាលឱ្យផ្នែកទំនាក់ទំនង
- Conduct communication training
- ផ្តល់ការអប់រំសុខភាពដល់ភ្ញៀវនិងក្រុមគ្រួសារ
- Provide health education for patient/families
- ផ្សព្វផ្សាយការវិនិច្ឆ័យជាតំបន់តាមរយៈសន្និបាតសុខភាពម្តាយនិងកុមារ
- Disseminate care standard through MCH Symposium
- ប្រជុំឡើងទាក់ទងជាមួយពេទ្យដទៃទៀត
- Regular meeting among hospitals

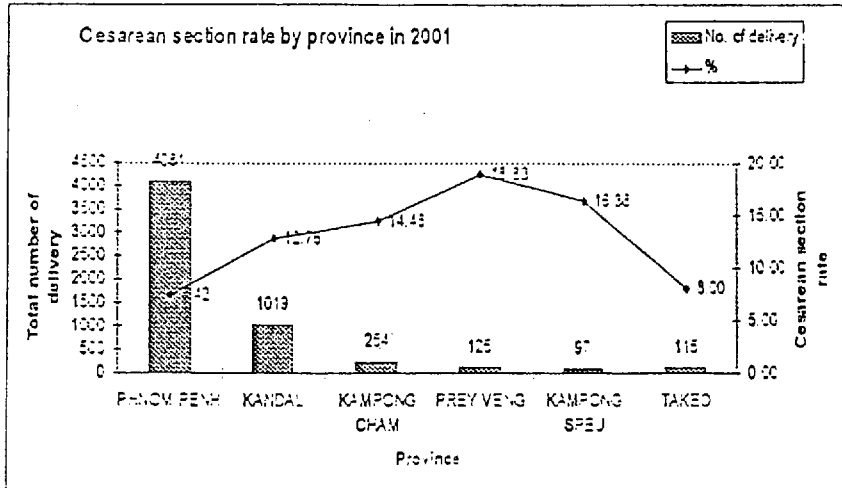
Management cycle







Cesarean section rate by province in 2001



សកម្មភាពក្នុងទិសដៅ មជ្ឈមណ្ឌលជាតិ គាំពារមាតានិងទារក
 ជាមណ្ឌលបណ្តុះបណ្តាល ឆ្លបនិងគ្រូពេទ្យ ផ្នែកសង្គ្រោះសម្តេចបន្ទាន់
 Activities of NMCHC as a training center
 Midwife & physician training for EmOC

- ធ្វើអោយមានការបណ្តុះបណ្តាលគ្រូបណ្តុះបណ្តាល នៅមជ្ឈមណ្ឌលជាតិគាំពារមាតានិងទារក
- Conduct TOT at NMCHC
- បង្កើតជាកញ្ចប់បណ្តុះបណ្តាល (វាយតម្លៃតម្រូវការ- រៀបចំ-ដាក់អនុវត្ត-វាយតម្លៃ)
- Set up training package (needs assessment-preparation - implementation- evaluation)
- ធ្វើផែនការបណ្តុះបណ្តាល(ឆ្លបមណ្ឌលសុខភាព មន្ទីរពេទ្យបង្អែក គ្រូពេទ្យមន្ទីរពេទ្យបង្អែក)
- Make a plan for training (HC/RH MW RH Dr)
- ធ្វើការបណ្តុះបណ្តាលដល់បុគ្គលិកមកពីខេត្ត
- Provide training for staff from provinces
- ធ្វើការចុះអភិបាល
- Perform supervision

- ពិនិត្យសារឡើងវិញរាល់ឯកសារចុះអភិបាល
- Revise checklists for supervision
- ធ្វើសិក្ខាសាលាស្តីពីការចុះអភិបាល
- Conduct supervision workshop
- ក្រុមការងារសេវាសម្ភព(នាយកដ្ឋានធនធានមនុស្ស សាលាបច្ចេកទេសថែទាំវេជ្ជសាស្ត្រ សាលាបណ្តុះបណ្តាលភូមិភាគ អ្នកផ្តល់ជំនួយ)
- Midwifery technical workinggroup (HRD,TSMC,RTC,Donors)
- នឹងចូលរួមក្នុងសកម្មភាពតាមដានវេជ្ជសម្ភពសាវ័ន្តជាមួយកម្មវិធីជាតិសុខភាពបន្តពូជ
- Will joint spot monitoring for EOC activities with reproductive health national program

អាំងឌីកាទ័រដែលជាលទ្ធផលនៃសកម្មភាពក្នុងទិសដៅ

មជ្ឈមណ្ឌលជាតិ គាំពារមាតានិងទារក

ជាមណ្ឌលបណ្តុះបណ្តាល ឆ្លុះបញ្ចាំង និងត្រួតពិនិត្យ ផ្នែកសង្គ្រោះសម្ភពបន្ទាន់

Output indicators of NMCHC

as a training center

Midwife & physician training for EmOC

Training system at NMCHC

Key players for training system

- Under the supervision of the Director of NMCHC, core members of the 3 divisions mainly consist of “training working group”. They implement and manage the training cycle for MW/Dr training course.
 - Training division
 - Nursing division (MW/NS)
 - Clinical Division (Dr)
- Administrative Bureau also plays a role on administrative and financial management for the training course.

Training cycle

1. Plan (Annual plan, preparation workshop)
2. Action (training conducted)
3. Monitoring/evaluation (organizer meeting during training, supervision)
4. Review (hearing after training and feedback meeting after supervision.)

* "List of modification after feedback" is attached

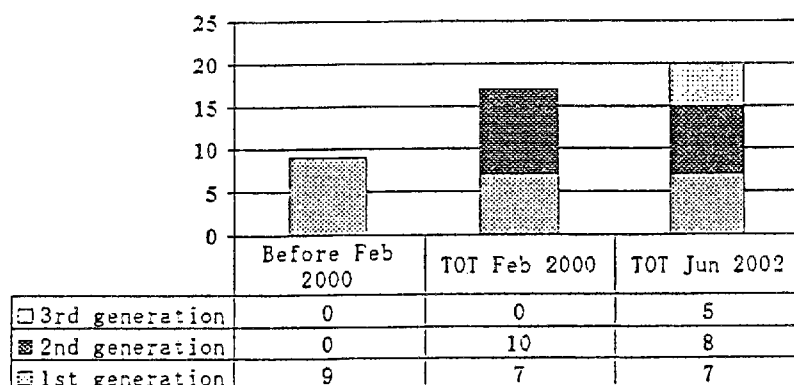
Types of evaluation

Need assessment	Supervision for trainee selection
Baseline evaluation	Pretest
Input evaluation	Preparation workshop Organizer meeting
Process evaluation	Regular reports by trainees and trainers Regular evaluation session or Q&A session during the course
Outcome evaluation	Post test Quantitative & qualitative evaluation for task achievement by tutors
Impact evaluation	Supervision after training Regional and national health indicators

For human resources,

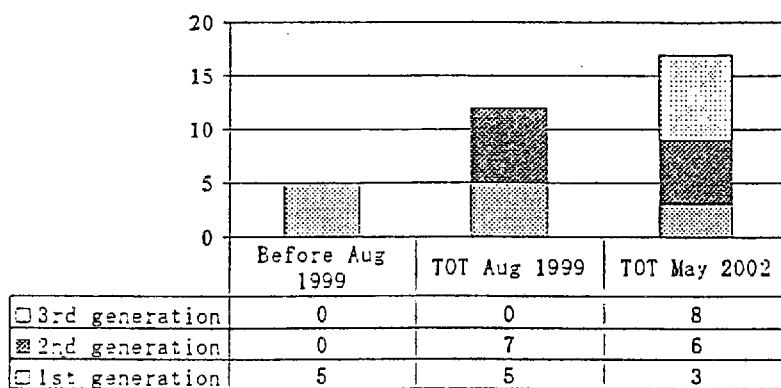
1. To sustain the training activities as a training center, human resource development through TOT is the key strategy.
2. Even through the “brain drain” to NGOs which provide much higher salary, number of trainers become higher after TOT.
3. More staff are involved and motivated as a trainer. New trainers replace old trainers and training activities are still continuing at NMCHC.

Number of MW/NS trainers after TOT



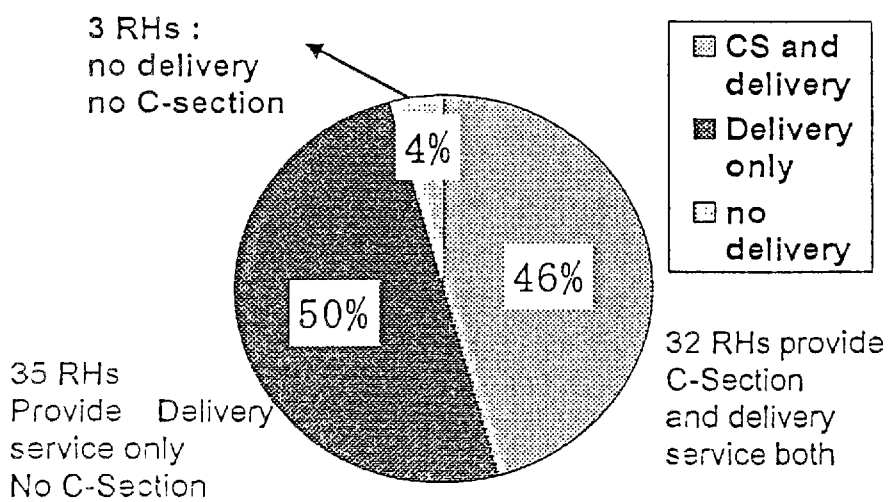
* 1st generation are the chief of each ward, 2nd and 3rd generation are vice chief of each ward. 4 MW trainers moved to NGOs.

Number of doctor trainers after TOT



* 1st generation is the former chief of ward. 2nd and 3rd generation are the present chief and vice chief of ward. 3 trainers moved to NGO and University.

Obstetric activity at 70 referral hospitals in Cambodia



Source: National Health Statistics, 2001, MOH Cambodia

Trained Midwife ; organization & course provided

Health center MW

MCHC HC course	263	(Persons)
LSS HC course	109	
4 month course	86	

Subtotal 458

Referral hospital MW

MCH Ref hosp course	71
LSS for Ref hosp	65

Subtotal 136

Others

LSS for others	33
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Subtotal 33

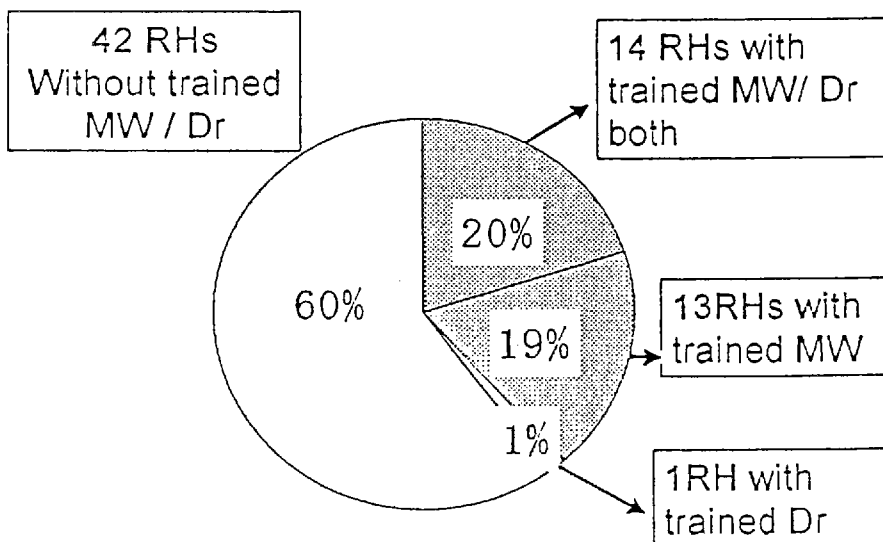
Grand total trained MW (Persons) 627

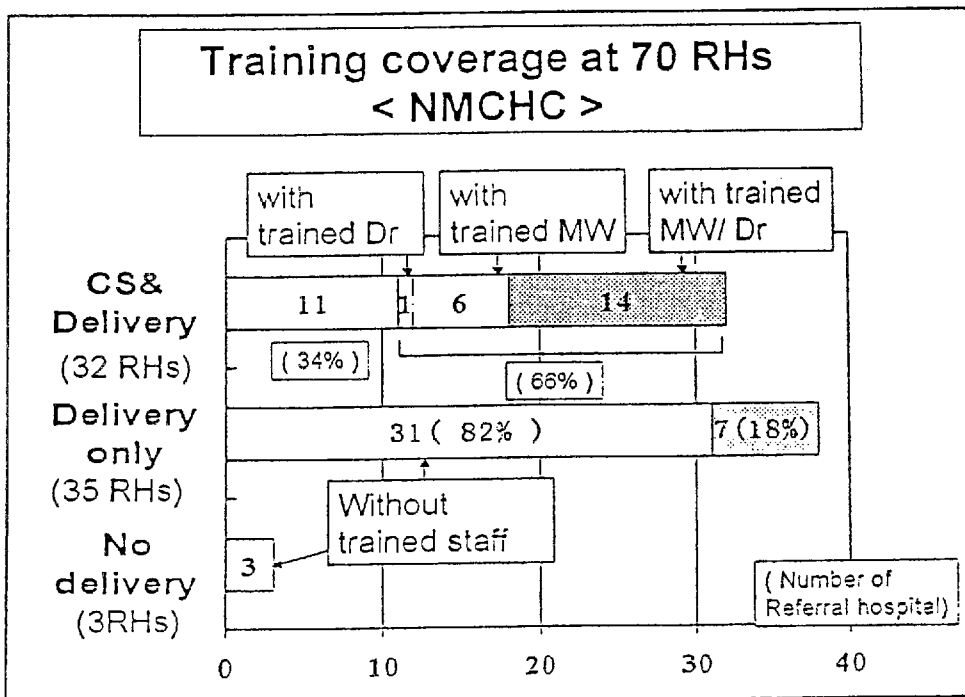
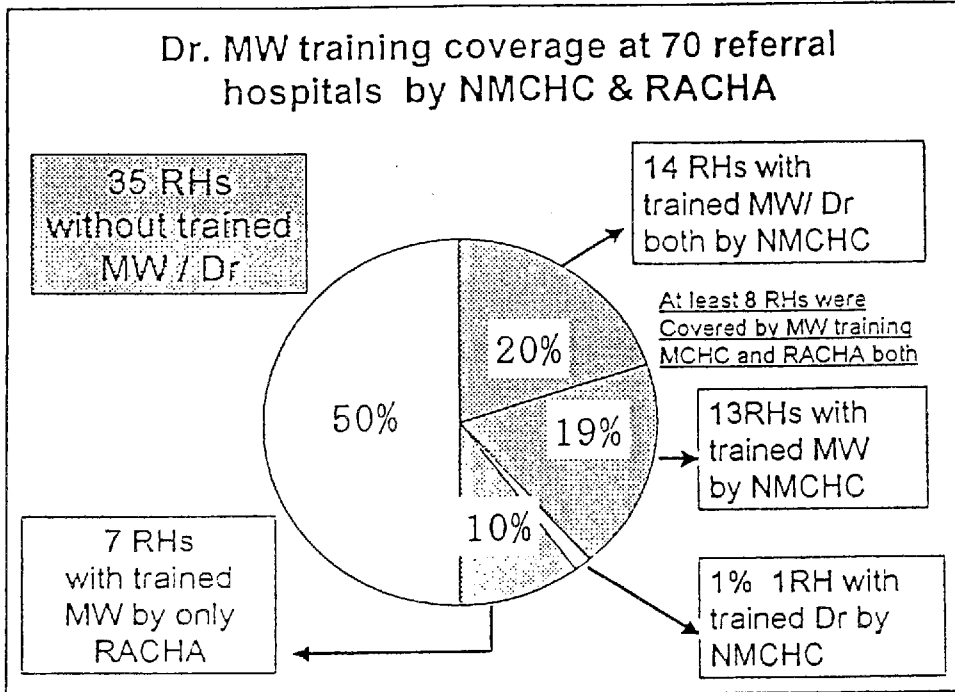
Physician training & Midwife training conducted by National MCH Center

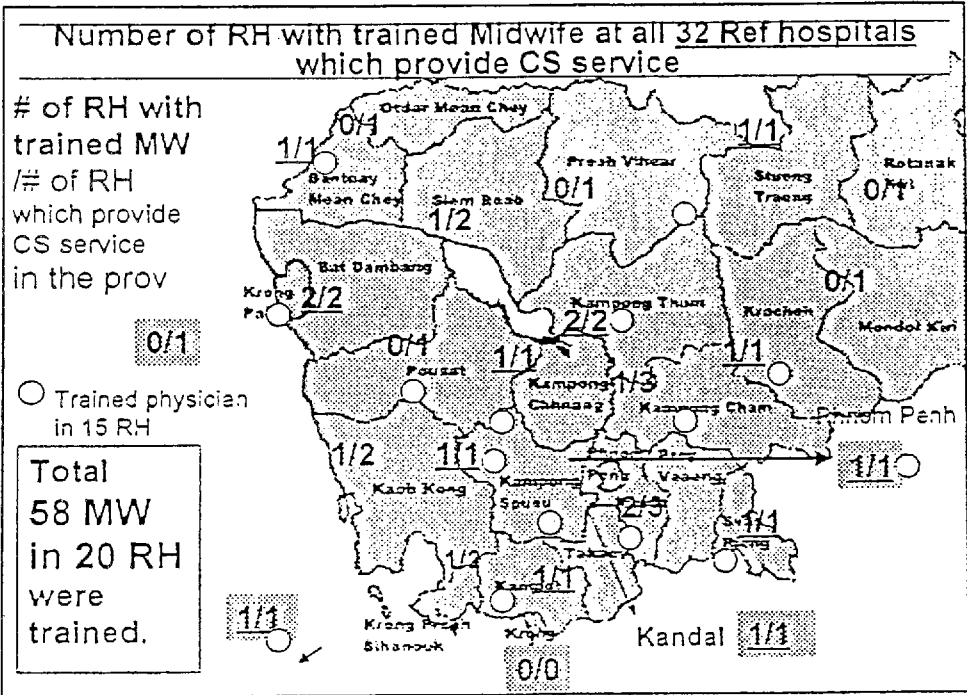
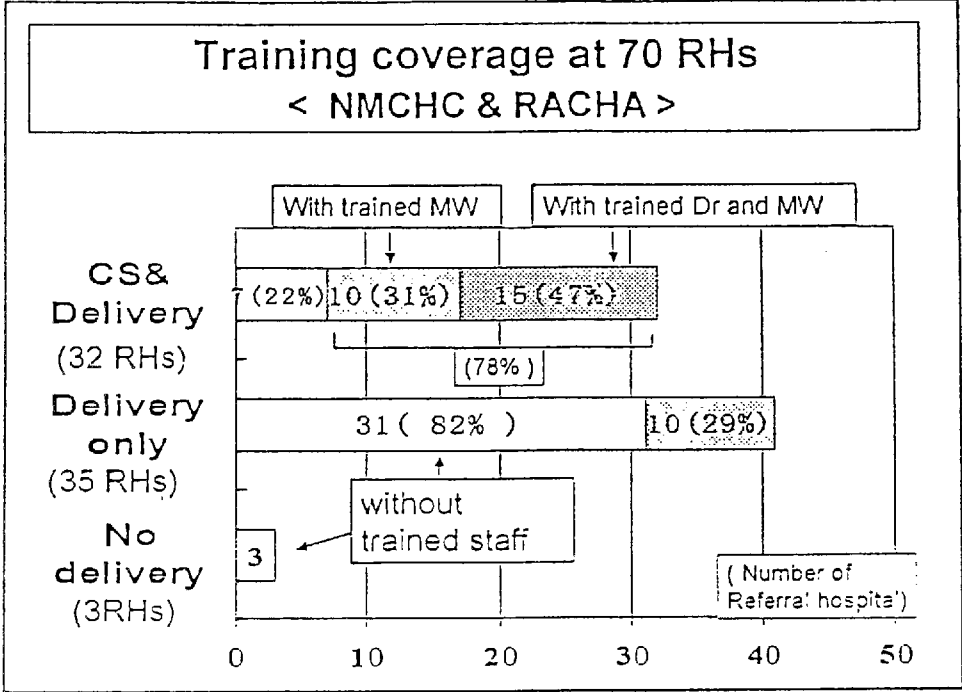
- Midwife refresher training on Emergency Obstetric Care for RH Midwife has been conducted since March 2000 until now Oct 2002.
 - 5 week course : 5 times
 - 71 midwives working at 27 RHs
- Physician refresher training on Emergency Obstetric Care has been conducted since Dec 2000 until now Oct 2002. Midwife from the same hospital attended the above midwife course.
 - 3 month course: 3 times
 - 15 physicians working at 15 RHs

Training coverage

Dr. MW training coverage at 70 referral hospitals by NMCHC

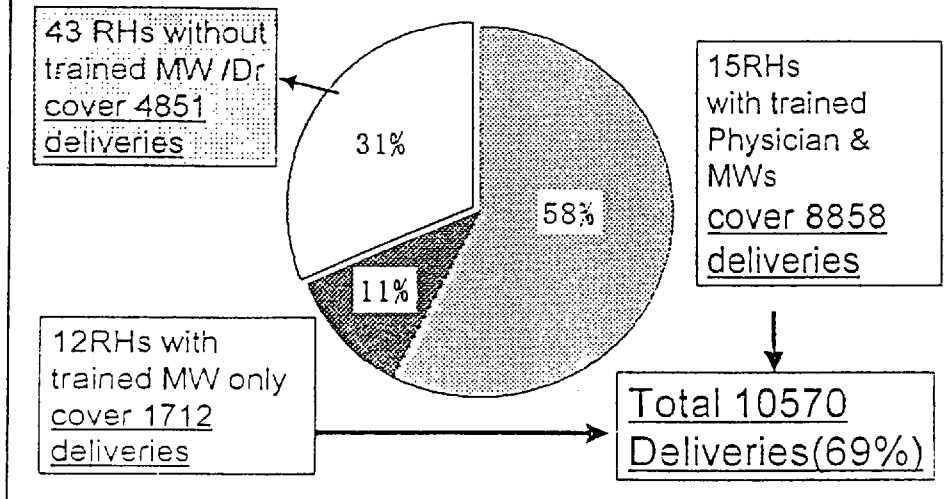






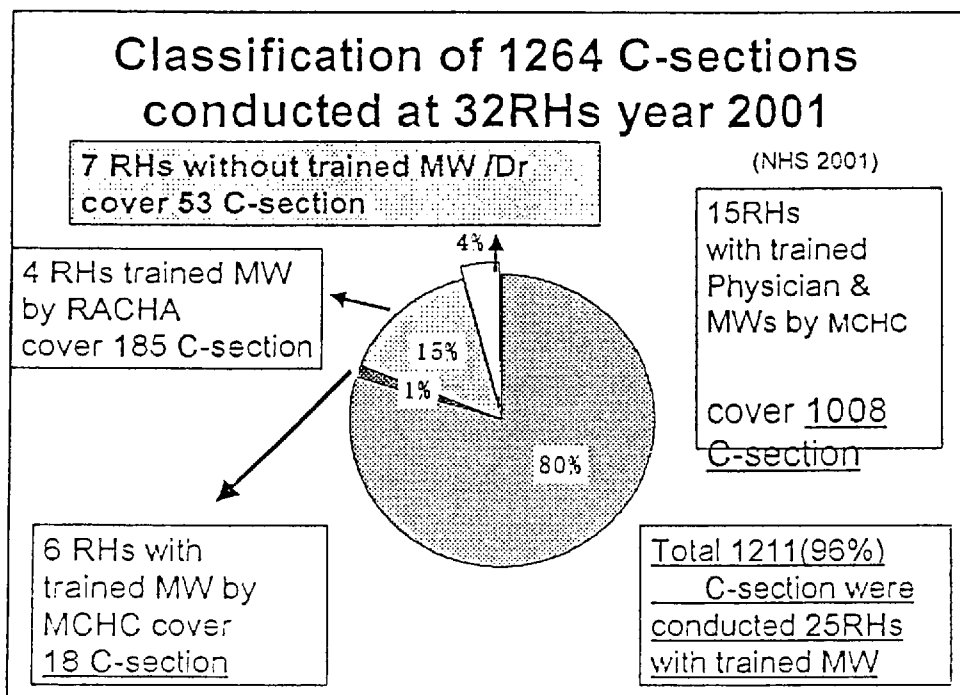
Classification of 15421 deliveries conducted at 70RHs year 2001

(NHS 2001)



Classification of 1264 C-sections conducted at 32RHs year 2001

(NHS 2001)



Impact evaluation
- Midwife performance before
and after training -

Purpose: To evaluate impact through comparison of midwife performance before and after training.

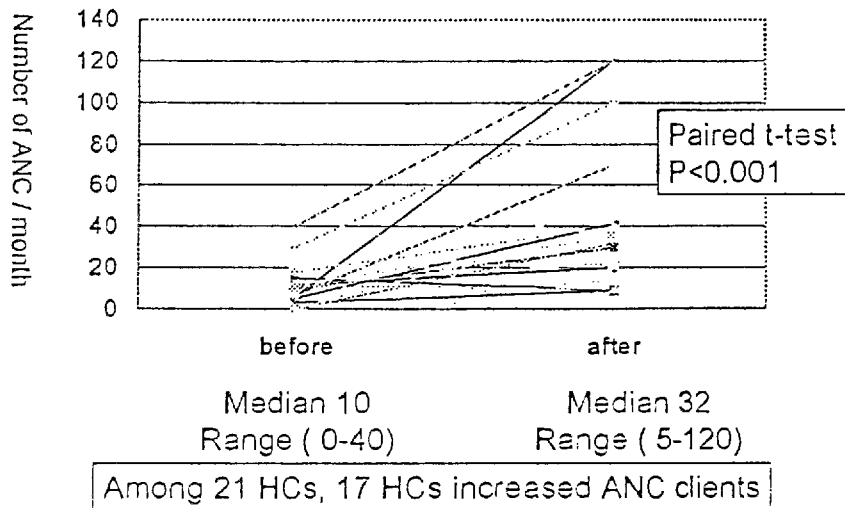
Subject: 21 midwife - trainee working at 21 health centers in 9 provinces, 6 midwife – trainee working at 6 RH in 6 provinces.

Method: Measurements before training were collected through questionnaire at the beginning of the training. Measurements after training were collected through checklist at the time of supervision by NMCHC supervisors.

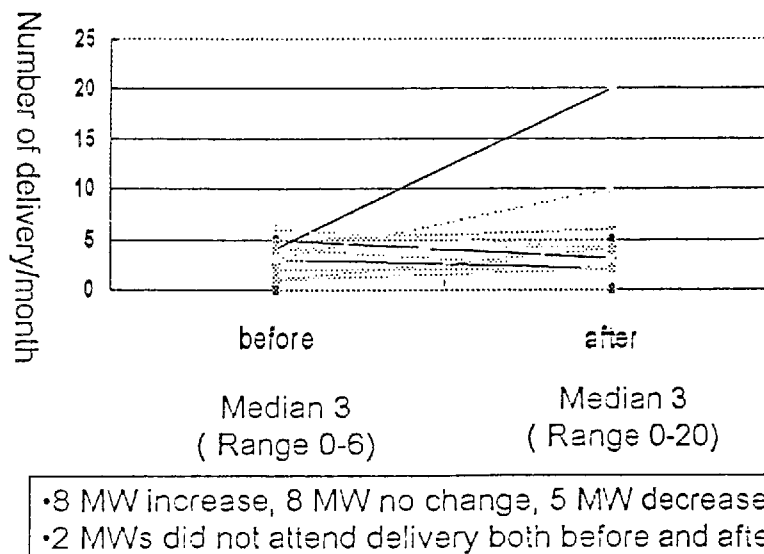
Measurement

- Number of antenatal care in the HC per month
- Number of delivery at home attended by trained Midwife per month

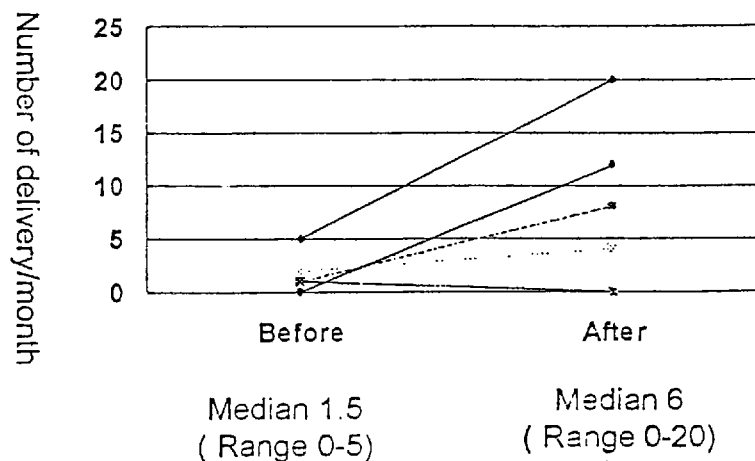
Number of Antenatal care at HC (21 HCs)



Number of delivery attendance at home by trained HC MW (21 Midwife trainees)



Number of delivery attendance at home by trained RH MW (6 MW)



•4 MW increase, 2 MW decrease

Remarks

- There was no delivery at 5 HCs both before and after training
- 2 HC started to provide delivery service after training
- Before training, 1 HC MW did not attend deliveries. After training, all trainees involve delivery service either at home or at HC

Summary

- Number of ANC at HC is significantly increased after training
- Number of delivery attendance at home by RH MW trainee are increased, but that by HC MW trainees does not show significant difference.
- Sample size is small so that the results could not be generalized. Further following through supervision need to be planned.

សកម្មភាពក្នុងទិសដៅ មជ្ឈមណ្ឌលជាតិ គាំពារមាតានិងទារក
ជាមន្ទីរពេទ្យអនុវត្តកម្មវិធីបង្ការចម្លងមេរោគអេដស៍ពីម្តាយទៅកូន

Activites of NMCHCfor PMTCT

- ដាក់អនុវត្តកម្មវិធីបង្ការការចម្លងមេរោគអេដស៍ពីម្តាយទៅកូននៅក្នុងមជ្ឈមណ្ឌល
- Implementation of PMTCT at NMCHC
- ពង្រីកកម្មវិធីទៅដល់ខេត្តដទៃទៀត(បាត់ដំបង)
- Expanmd PMTCT to other provinces(Battambang)
- ក្រុមការងារបច្ចេកទេសកម្មវិធីបង្ការការចម្លងមេរោគអេដស៍ពីម្តាយទៅកូន
- PMTCT technical working group(NCHADS,Donors...)
- គាំទ្របច្ចេកទេសដល់មន្ទីរសុខាភិបាលខេត្តក្នុងការដាក់ចុះកម្មវិធី បង្ការការចម្លងមេរោគអេដស៍ពីម្តាយទៅកូន
- Technical support to PHD for introduction of PMTCT

អាំងឌីកាទ័រដែលជាលទ្ធផលនៃសកម្មភាពក្នុងទិសដៅ

មជ្ឈមណ្ឌលជាតិ គាំពារមាតានិងទារក

ជាមន្ទីរពេទ្យអនុវត្តកម្មវិធីបង្ការចម្លងមេរោគអេដស៍ពីម្តាយទៅកូន

Output indicators of NMCHC for PMTCT

- Technical working group started its activities: NMCHC, NCHADS*, UNICEF, WHO, & JICA (1999)
- Rapid assessment of on mother-to-child transmission of HIV in Cambodia (1999)
- National policy on preventing mother-to-child transmission of HIV (Approved by MOH, Sep. 2000)
- Pilot project on prevention of mother-to-child transmission of HIV in Cambodia (Approved by MOH, Mar. 2001)
- First pilot started at NMCHC in Nov. 2001
- Second pilot started in Battambang in Aug. 2002
- Guidelines for expansion of PMTCT (in preparation)

* National Center of HIV/AIDS, Dermatology, and STIs.

Mothers' awareness on HIV/AIDS

(Results of interview conducted at mothers' class at NMCHC,
Jan. 01)

Heard about HIV/AIDS	115(70.6%)
Know the problem of HIV/AIDS	90(54.5%)
Know the way of infection of HIV	126(77.3%)
Know what is the cause of AIDS	56(34.4%)
Know that baby can be infected from HIV/AIDS	137(83.0%)
Total	165

Training activities

by NCHADS and NMCHC trainers

	No. of Trainees (NMCHC)	No. of trainees (Battambang)
Counselor	17 (including 10 trained by a Thai expert)	7
Labo staff	4 (supervised by a Japanese expert)	4
Other health staff	545	26

Health staff received training on "general information about HIV"
and "infection control"

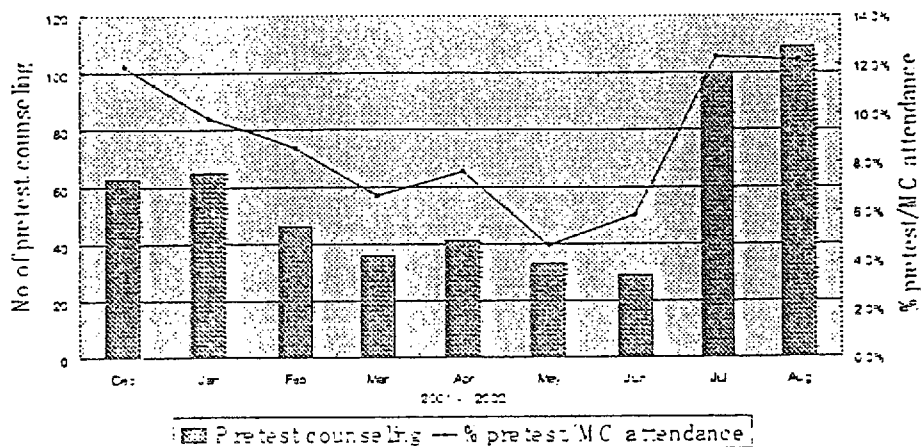
SUMMARY OF TURNOUT

Date	26/11/01 –31/09/02
Duration	10 Months
N° of Client in Mother Class	W6377+H299
N° of Appointment	W1038+H97
% of Appointment of Women	16.27%
N° in Pre-test Counseling	W631+H274
% of Pre-test Counseling	W60.78%,H282%
N° of Testing	W628+H272
N° of Post-test Counseling	W512+H224

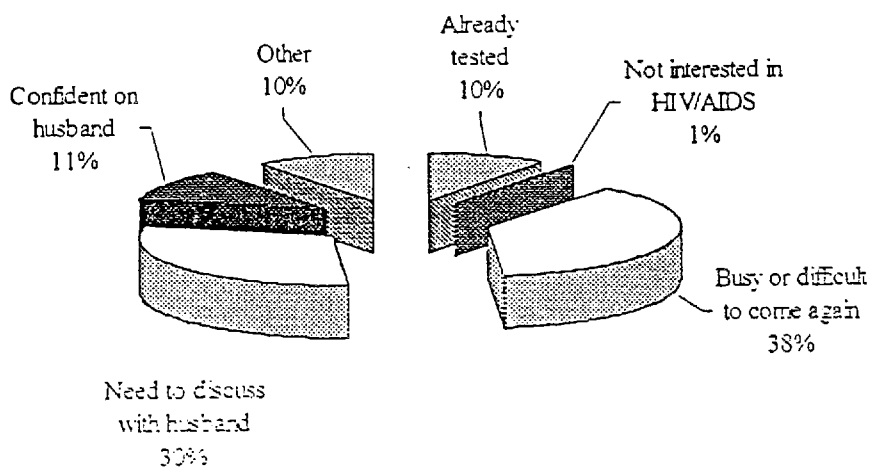
SUMMARY OF TURNOUT(contin)

Posttest counseling (Return rate)	512 (81.14%)
% of couple counseling	274 (35.97%)
HIV positive	W17 +H4
Delivered (+NVP)	5
Exclusive breastfeeding	2

VCT activities at NMCHC



Reason for refusal of VCT at Mothers' class in NMCHC (N=1163 26/11/01 - 15/02/02)



Network workshop

(Feb, 02)

Objectives:

- to inform and launch the PMTCT program at NMCHC
- to discuss about care network to follow up the program

Participants (Total 33)

- PMTCT technical working group
- NMCHC core staff
- Hospitals for HIV care(4)
- NGO working on HIV care (6)
- VCT center staff (4)
- Staff from Battambang province (3)

Conclusion

- Use ANC Clinic as site for Health Education and information about VCCT of PMTCT can improve the awareness of the clients and also the relative especially husband .
- Husband has enormous influence on deciding “How to Manage the family”
- VCCT session is good for informing clients about others components related to health.

Infection control activities at NMCHC

Analysis of obstetrical intervention at NMCHC (from 15 June 2000 to 14 June 2001)

Among 6884 delivery cases in total,

- Vaginal delivery 6241 cases
- Cesarean section 643 cases

426 Cesarean section cases (66% out of 643) were analyzed in detail.

Main adverse events are

- Blood transfusion: 8% (33/426)
- Wound infection: 12% (52/426)
- Cesarean hysterectomy : 5% (22/426)

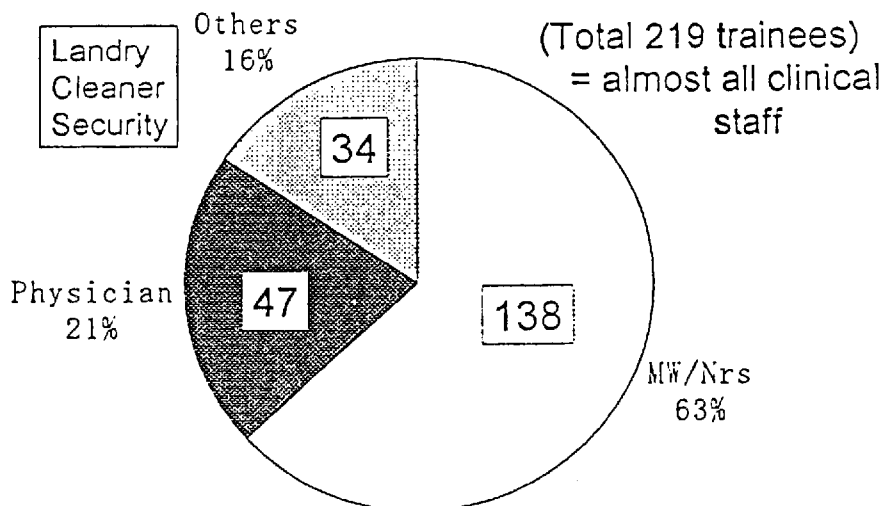
(Presented at annual conference of Cambodian Medical Association in Nov.

01)

Infection control activities

- Infection control committee started its activities as a part of PMTCT implementation (Feb.01). Members are from all the services and levels of the hospital.
- Preparation of infection control manual and guidelines at NMCHC (started in Feb. 01, approved by MOH in Sep. 01)
- Infection control checklist was developed (Oct.01)
- In-service training for NMCHC hospital staff (Total 219 staff participated, Dec.01-Mar.02)

Trainee classification



Infection control training analysis. 2002 MCH center

Summary of Pre/posttest results

- 219 trainees were trained = almost all of clinical staff were covered
- Compared mean rate between pre and post test, knowledge increased 19% in physicians, 12% in MW/Nrs, and 11% in other staff.
- Each training group also improved knowledge in the mean of post test.
- 7% of MW/Nrs and 9% of other staff decreased knowledge in post test. All physician improved knowledge.
- Among Mw/Nrs, Team leader improve knowledge better than non team leader staff, and also team leader's score distributed more homogenous than non team leader staff. No one decrease knowledge among team leaders.

Pre-monitoring results at 11 services in NMCHC in Jan-Feb, 02

- Before infection control training -

1. 57 staff from 11 wards were monitored fro hand washing, skin disinfection, wound dressing, decontamination & sterilization and cleaning and waste management.
2. Points to be improved are;
 - Hand washing taking out jewelries
 - Decontamination duration after wiping out instruments
 - Skin disinfection before operation
 - Waste collection

Plan for the next step in the training cycle

- Outcome evaluation is necessary as the next step
 1. Trainees knowledge already proved to be improved by pre/post test
 2. Trainees attitude & performance need to be monitored & evaluated through post monitoring (Sep-Oct,2002)

សកម្មភាពក្នុងទិសដៅ មជ្ឈមណ្ឌលជាតិ គាំពារមាតានិងទារក

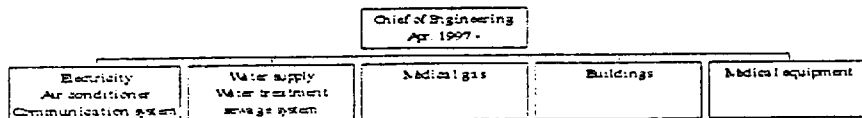
ជារោងជាងថ្នាក់ជាតិ

Activities of NMCHC as a National workshop

- ធ្វើអោយមានប្រព័ន្ធរៀបចំទំនិញពេទ្យ(អាគារនិងឧបករណ៍ពេទ្យ)
- Establish Hospital maintenance system(Facility&Medical equipment)
- ធ្វើការបណ្តុះបណ្តាលដើម្បីរៀបចំទំនិញរដ្ឋបាលបុគ្គលិកនៅមន្ទីរពេទ្យបង្អែក(អនាម័យ)
- Conduct training for preventive maintenance for referral hospital staff (in uture)
- ធ្វើអោយមានជារោងជាងថ្នាក់ជាតិ
- National workshop
- ធ្វើជាមួយអនុគណៈកម្មការទំនាក់ទំនងឧបករណ៍ពេទ្យ
- Medical equipment subCOCOM(Dep hospital services, Donors)

អាំងឌីកាទ័រដែលជាលទ្ធផលនៃសកម្មភាពក្នុងទិសដៅ
 មជ្ឈមណ្ឌលជាតិ គាំពារមាតានិងទារកជារោងជាងជាតិ
 Output indicators of NMCHC
 as a National workshop

Organogram of Engineering Section
 (Apr. 1997-)



Develop guidelines

- Guidelines for maintenance and safe management of hospital facilities (Nov. 2000)
- Guidelines for maintenance and safety control of bio-medical equipment (Jan.2001)

Conduct training

- Training of hospital staff was conducted (Jul.- Dec. 2000)
- Trainees: 8 staff from Engineering Section (6 staff for facility maintenance, 2 staff for medical equipment maintenance)
- Trainers: JICA experts
- See the pictures on page 1 and 20 in "Guidelines of maintenance and safe management of hospital facilities"

Maintenance plan

- Routine maintenance plan was developed for medical equipment and facility maintenance. It was implemented during the daily activities of engineering section.
 - “Criteria for annual routine maintenance for medical equipment” (Finalized in Apr. 2002)
 - “Guidelines for maintenance and safe management of hospital facilities” p.97 (Finalized Nov. 2000)
- Long term procurement plan was developed for spare parts, contract for maintenance, and replacement cost for 2003-2016.

Outcomes of Medical Engineering section

	Number of services provided		Reference
	Preventive maintenance	Repair*	
2000	55	39	Annual report 2000, p.40
2001	43	33	Annual report 2001, p.38

* Effective preventive maintenance improve the condition of medical equipment and reduce number of repair services.

Medical equipment utilization rate at NMCHC

	Type of cooperation	Cost basis	Quantity basis	Reference
2000	JICA GA 1993	87%	86%	Annual report of 2000 P.63
	JICA GA 1997	91%	93%	
	JICA TC (97-99)	73%	83%	
2001	JICA GA 1993	87%	89%	Annual report of 2001 pp.54-55 <i>l</i>
	JICA GA 1997	91%	94%	
	JICA TC (97-00)	95%	88%	

National Workshop

National workshop (1)

- Objective: To keep all medical equipment in working order at NMCHC (“In-house service”) and in other medical institutions in Phnom Penh city (“External service”), a part of engineering section at NMCHC carried out services as “National Workshop” in cooperation with the MOH. (Mar. 2001)

National Workshop (2)

Service scheme of National Workshop

- Make plan for maintaining and repairing medical equipment in the coverage areas
- Grasp the status of medical equipment in the coverage areas by data base
- Disseminate concept of preventive maintenance and medical engineering
- Make operation manuals, technical standard, and conduct training in collaboration of medical engineering subCOCOM
- Conduct training for technicians and operators.
- Negotiate and exchange the technical information with manufacturers and suppliers
- Advise specification of spare parts
- Monitor and evaluate the maintenance and repair in the coverage areas

National workshop (3)

- Concept and service scheme of “National workshop” was launched and management protocols were disseminated at “Seminar on medical engineering workshop” held on Apr. 2002. Participants 45 from MOH, National hospitals, and medical institutions)

Activities of National Workshop

- Management protocols of National workshop was developed and had consensus between MOH and NMCHC. (Apr. 2002)
- “Seminar on medical engineering workshop” held on Apr. 2002. (45 Participants from MOH, National hospitals, and medical institutions)
- “Guidelines for maintenance and safe control” developed in NMCHC was also adapted and implemented at the National workshop.
- Technical exchange program for medical equipment management between Sri Lanka and Cambodia was conducted. (May. 2002)
- Training materials “Introduction to Biomedical Engineering” was developed. (Jul 2002)

Outcomes of “medical equipment maintenance” in the MCH project

At NMCHC,

- Concept of preventive maintenance was understood by the manager team.
- Request national budget for spare parts of medical equipment was started in 2001 and disbursed in 2002.
- Contract with private company for the equipment maintenance at laboratory was started using user fee. (Jan. 2001)

At MOH

- Department of Finance at the MOH take responsibility for medical equipment & spare parts procurement according to the health strategic plan 2003-2007.

Problems of “medical equipment maintenance” in the MCH project

1. Human resources at MOH and NMCHC
 - No staff at enough technical level (Engineer) is dispatched as counterparts. (Salary problem for public officer)
2. Lack of consideration for technical standard at policy making level in the MOH

as Actual Performance 1 – 1

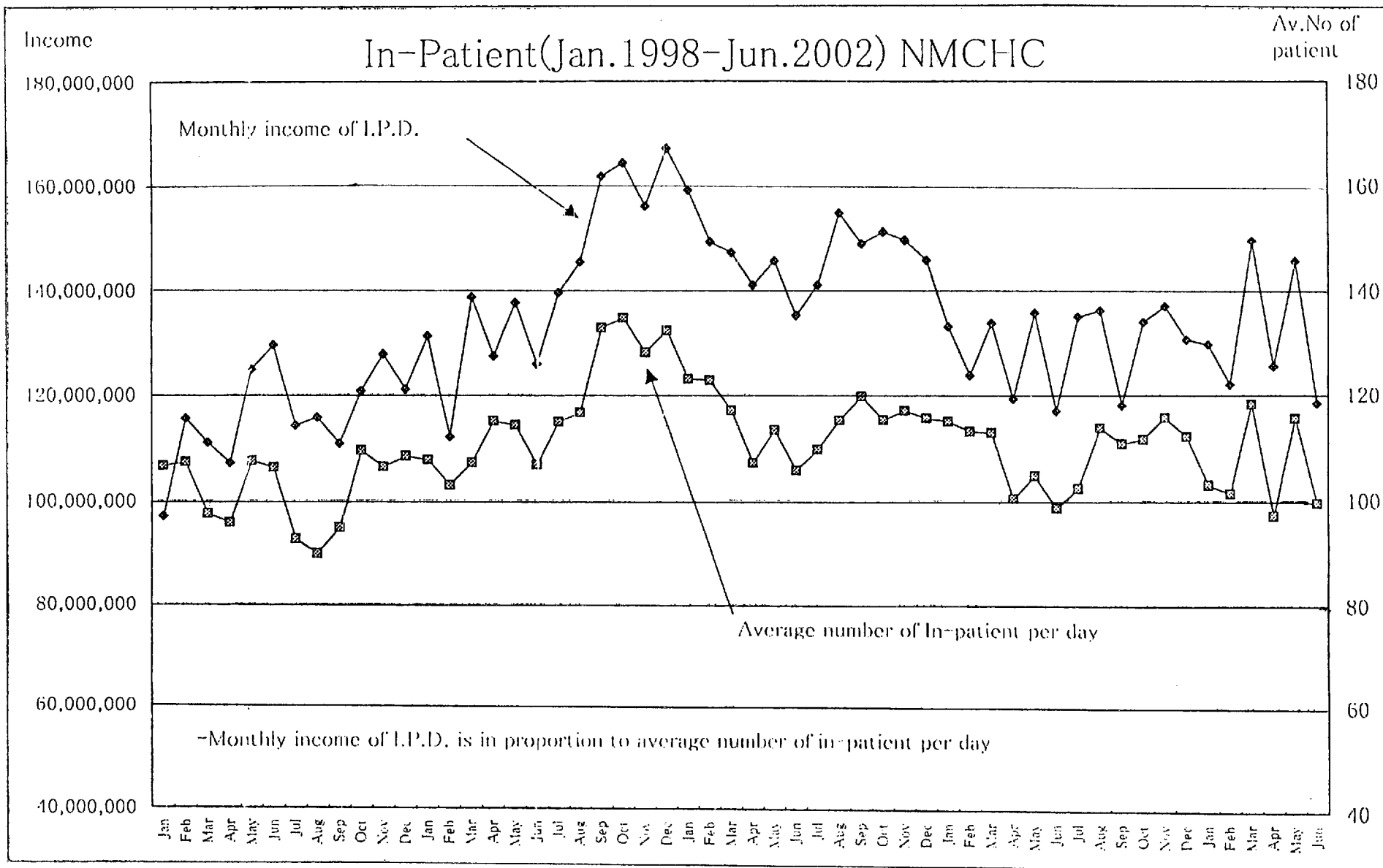
Number of trainees

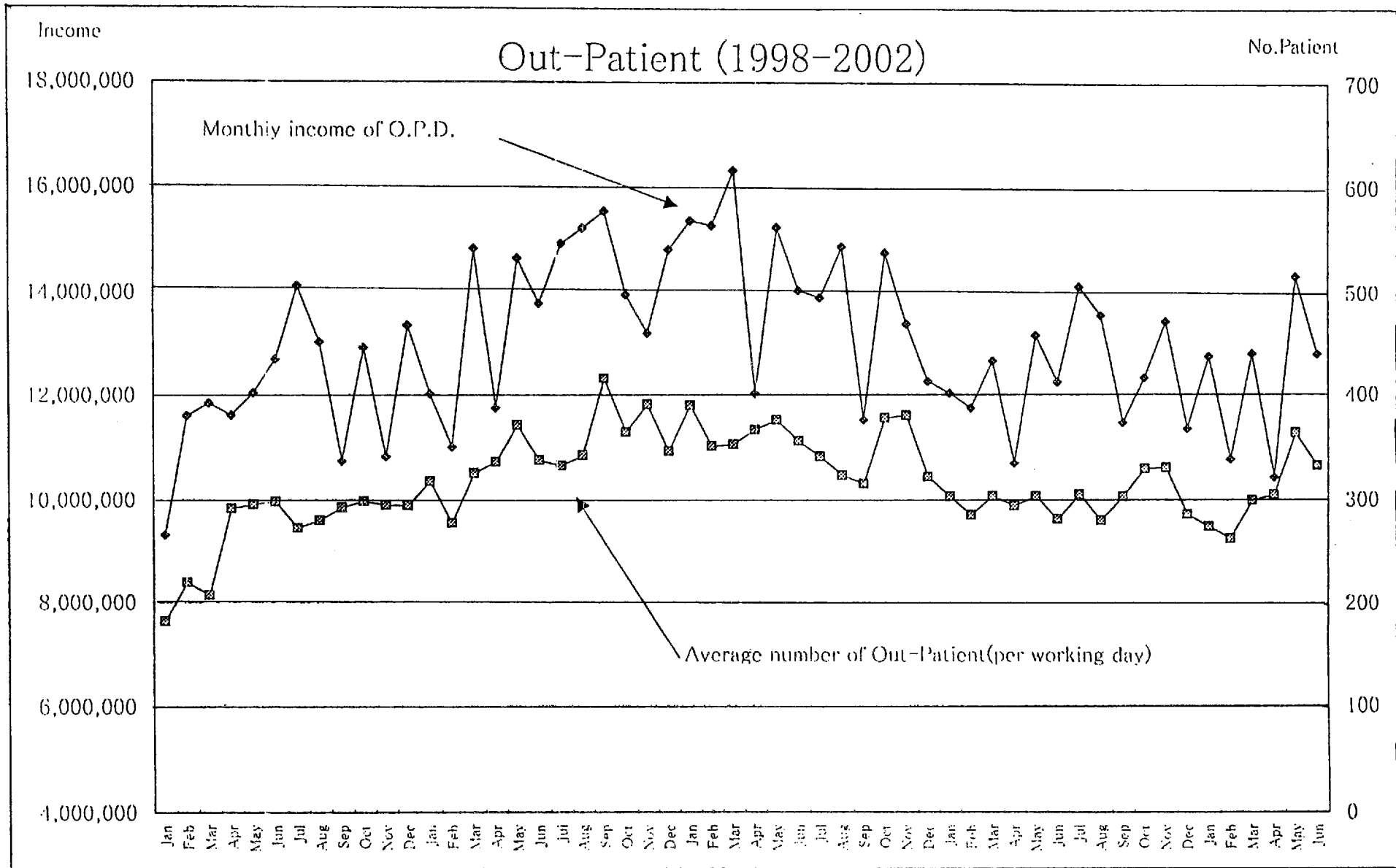
Training	Date/# of courses	Trainer	Trainee								
			NMCHC staff					Provincial staff			
			Dr	MW	NS	Labo staff	Others	Dr	MW	Labo staff	
Infection control	Dec.01 - Mar. 02	NMCHC staff	47	138			34				
Basic nursing care	May. 01	NMCHC staff		20							
TOT	3 courses	NMCHC staff	15	15							
Facility maintenance	Jul.-Nov.00	Japanese expert					6				
Medical equipment maintenance	Nov.01 - Jan. 02	Japanese expert					2				
Emergency obstetric care	3 courses	NMCHC staff	23					15			
MW training for HC	4 courses	NMCHC staff							80		
MW training for ref HP	4 courses	NMCHC staff							59		
Training of facilitators (HRT)	1 courses	Japanese expert	2	6	1	1	1				
HRT	3 courses	Japanese expert &	12	5	3	1	4				
PMTCT counseling	1 course	Third country & Japanese	5	5							
TOT for counseling	1 course	Third country expert									
Counseling training	2 courses	NMCHC staff	1	6							
Laboratory training	1 course	Japanese expert				4					
Laboratory training	1 course	NMCHC staff								4	
TOTAL			105	195	4	6	47	15	139	4	GRAND TOTAL 515



ANNEX 5

as Actual Performance 1 - 2





as Actual Performance 1 – 3

NMCHC PERINATAL MORTALITY RATE YEAR 2000-2001

YEAR	2000	2001
Total perinatal death	422	403
Still birth	255	247
Born in NMCHC (≤ 1 week)	134	129
Born in NMCHC (> 1 week)	8	14
Out born	25	13
Total new born (born in NMCHC) < Alive + Still birth >	7334	6590
Perinatal mortality rate*	53	57

*2000 > 1w = 1
*2001 > 1w = 2

* Perinatal mortality rate = Still birth + Early neonatal death / all birth x 1000

NMCHC MATERNAL MORTALITY RATIO YEAR 2000-2001

YEAR	2000	2001
Total maternal death	51	24
Live birth	7079	6343
Maternal mortality ratio*	720	378

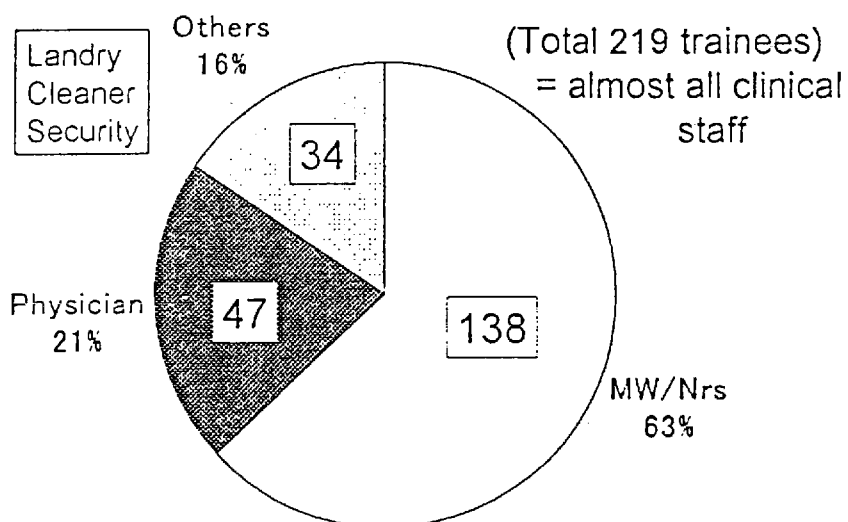
* Maternal mortality ration = maternal death / 100,000 live birth

as Actual Performance 1 – 5

Medical equipment utilization rate
at NMCHC

	Type of cooperation	Cost basis	Quantity basis	Reference
2000	JICA GA 1993	87%	86%	Annual report of 2000 P.63
	JICA GA 1997	91%	93%	
	JICA TC (97-99)	73%	83%	
2001	JICA GA 1993	87%	89%	Annual report of 2001 pp.54-55
	JICA GA 1997	91%	94%	
	JICA TC (97-00)	95%	88%	

Trainee classification



Infection control training analysis. 2002 MCH center

as Actual Performance 1 – 6

Analysis of obstetrical intervention at NMCHC (from 15 June 2000 to 14 June 2001)

Among 6884 delivery cases in total,

- Vaginal delivery 6241 cases
- Cesarean section 643 cases

426 Cesarean section cases (66% out of 643) were analyzed in detail.

Main adverse events are

- Blood transfusion: 8% (33/426)
- Wound infection: 12% (52/426) ←
- Cesarean hysterectomy : 5% (22/426)

(Presented at annual conference of Cambodian Medical Association in Nov.

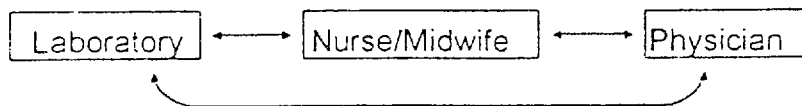
01)

Achievement(3) Communication with other services/ committees

Activities related Clinical division, Nursing division

- Collaborated with other division, new data sheet was established. (Fig 3)
- Clarified and notified items available duty time and day time. (Table 3)
- Specimen reception and result reporting time were clarified and notified each ward. (.Table 4)

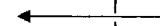
Collaborated with PMTCT program / Infection committee
Blood Transfusion Committee



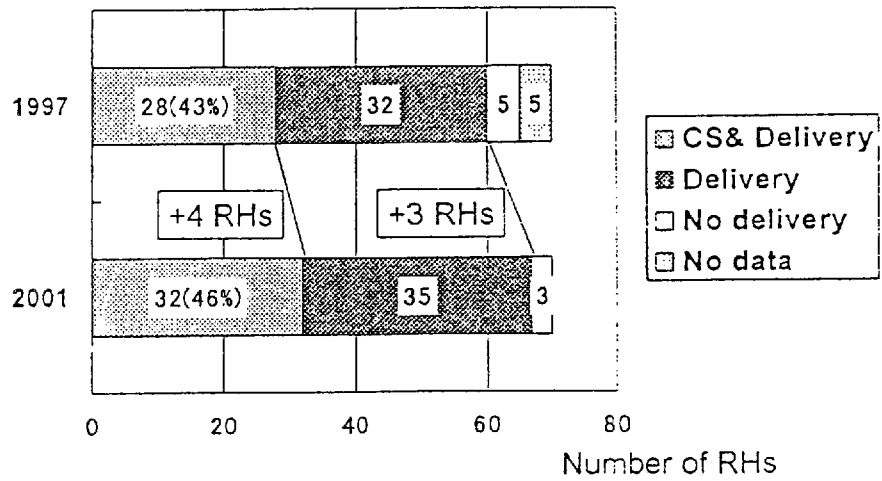
as Actual Performance 1 – 7

Table 1. Available test items in laboratory

	1998	2002
Hematology	7	13
Serology	2	6
Biochemistry	0	6
Stool parasitology	1	1
Urinalysis	4	4
Microbiology	0	3
Total number of items	14	32



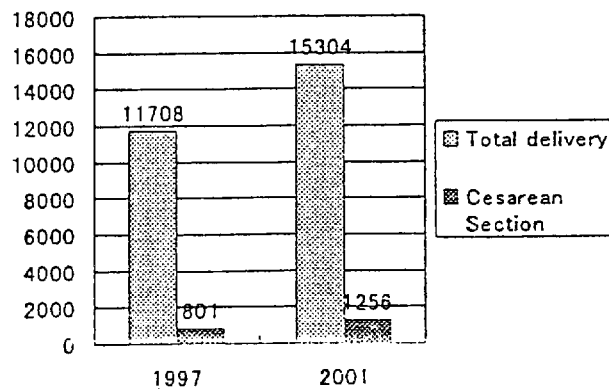
Change of obstetric service provided at 70 RHs
 - comparison year 1997- 2001 -



Source: NHS 1997, 2001

as Actual Performance 2 – 1

Number of deliveries and cesarean section at
 70 referral hospital in the province



Data: NHS 1997 & 2001

Referred case to NMCHC with refer letter in year 2000 and 2001

as Actual Performance 3 – 1

Year	2000	2001
	96case ←	104case ←
Preg related	87 cases(90%)	94 cases (90%)
Living Place	Phnom Pent 18 19% Kandal 37 39% Other prov 35 36% unknown 2 2%	21 20% 40 38% 43 41%
Number of facility	38 facilities from PP + Kandal + 7 Provinces (Kg Cham, Kg Speu, Prey Veng, Takeo, Kg Chhinaing, Kho Kong, Kg Thom)	43 facilities from PP + Kandal + 9 Provinces (Kg Cham, Kg Speu, Prey Veng, Takeo, Kg Chhinaing, Koh Kong, Kg Thom, Kg Som, Svay Rien)
	21RH 12HC 1National hosp 4 NGO or clinic 2 unknown	25RH 13HC 2National hosp 3 NGO or clinic

1. Hospital Management Seminar (Sep. 11-13, 2000)

- Objectives
 - Share the experiences of hospital management among hospitals at provincial and national level (personnel, health financing, and procurement)
 - Acquire the knowledge on procurement, medical equipment and facility maintenance management

Inputs

- Policy and orientation from MOH on hospital management (Dep. Of Finance, Human resource development, Hospital services, Planning, and Personnel)
- Presentation of hospital management from 4 national hospitals and 8 provincial hospitals
- Presentation by JICA expert on
 - Drug and Material management
 - Facility management
 - Medical equipment management

Inputs (Topics)

- 1st Symposium (Mar.2001)
 - Prenatal and post natal health education
 - Maternal death audit and other activities of safe motherhood national program
 - Prostaglandin use for fetal loss at midterm pregnancy
- 2nd Symposium (Mar.2002)
 - Eclapmsia management
 - Active management of 3rd stage
 - Partgraph use

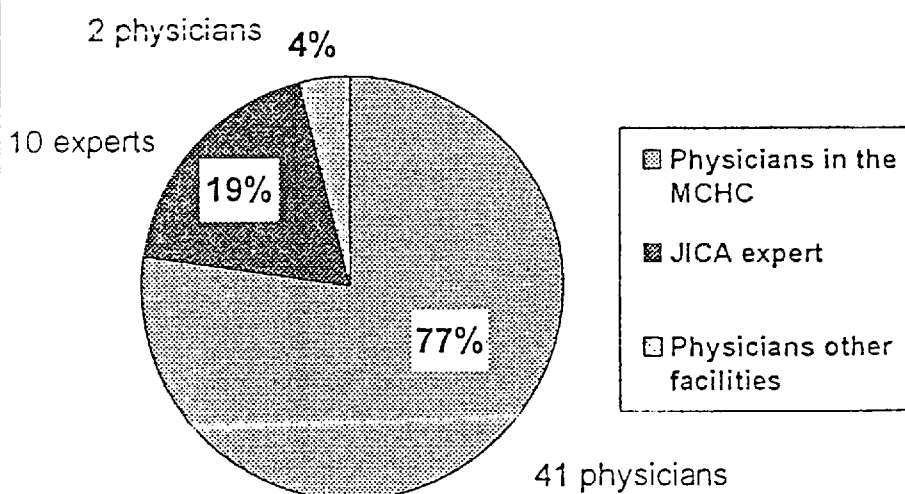
Outputs/outcomes

- Standard protocols on clinical/nursing care were disseminated.
- Service providers start communication among national and provincial level, especially Dr and MW working at referral hospital.

3. Physician meeting

- Physician clinical meeting re-started on 27 July 2001. It has been conducted every Friday regularly.
- From 27 July 2001 to 20 Sep 2002, there were 55 Fridays except holidays and workshop day
- Friday physician clinical meeting were conducted 44 times among 55 Fridays
- There were 53 presentations in 44 meetings

Classification of presenters in 53 presentations



4. HRD, TSMC/RTC

- Refresher course for midwife (discussion on “Midwifery Package”),
 - see “Analysis on midwife training in Cambodia”
- Preparation on 1 year course for registered midwife
- Midwife kit provision to TSMC/RTC for as teaching materials

Organization Chart of NMCHC

As of April 2002

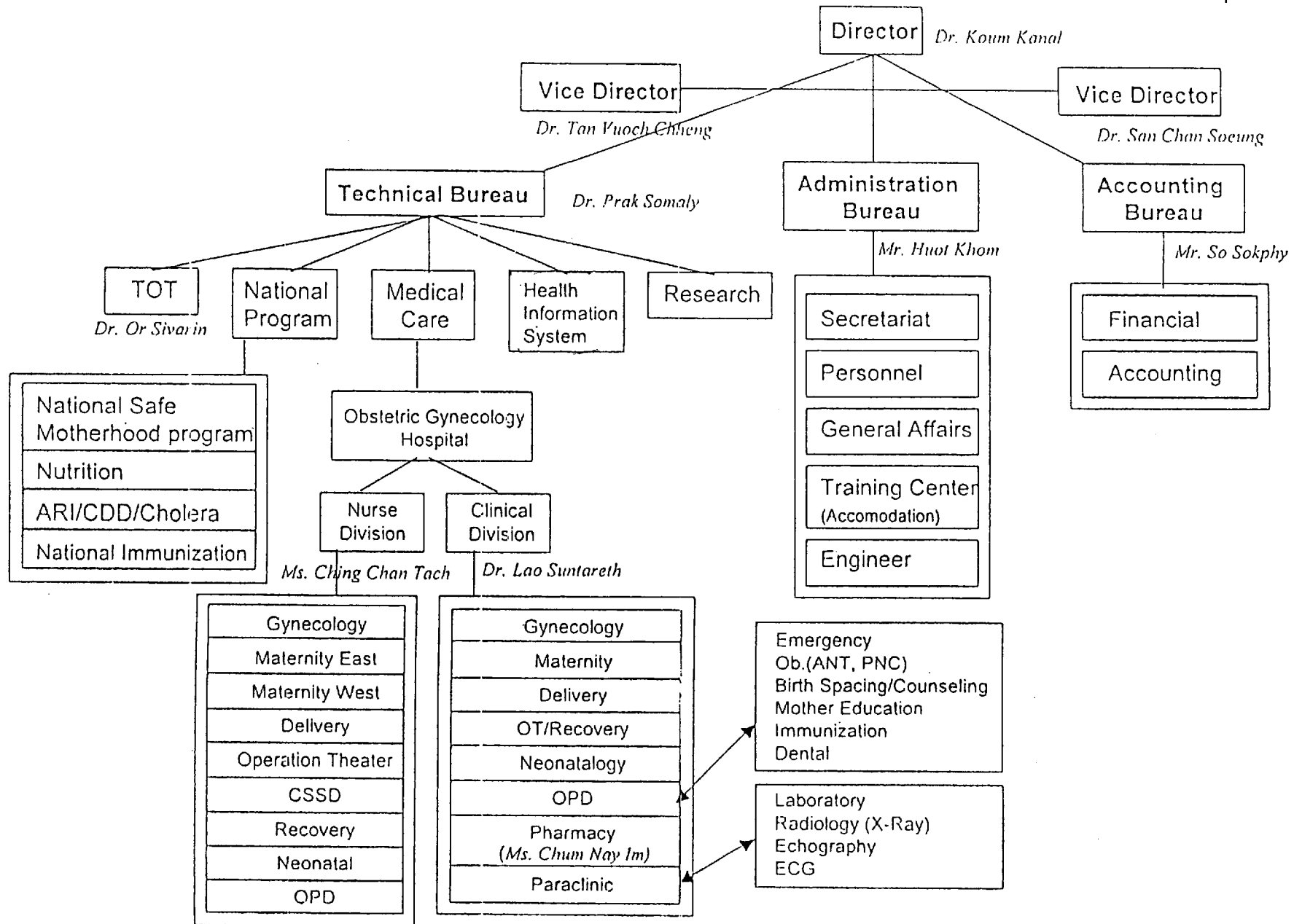
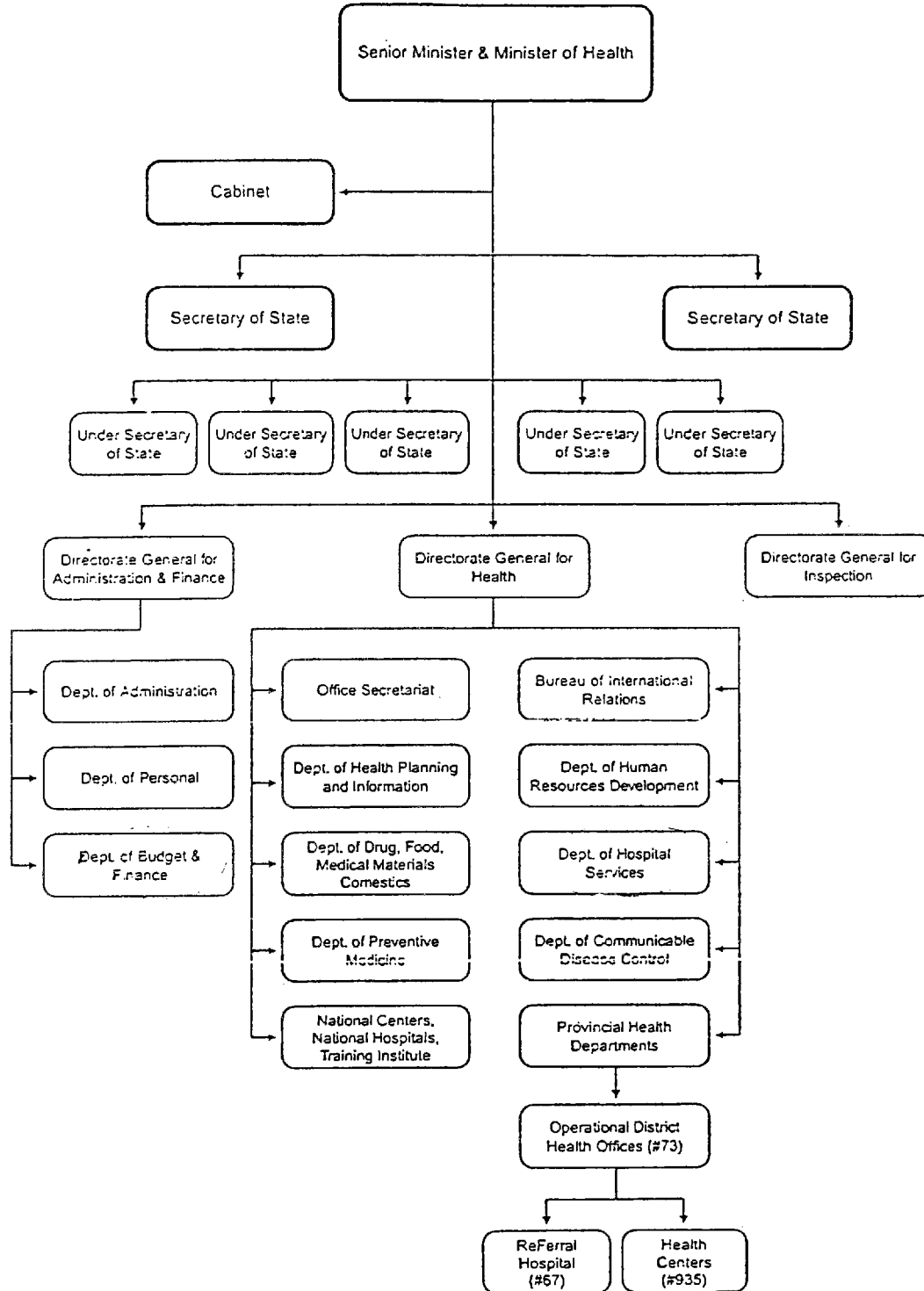


Figure 4-1 Organizational Structure of the Ministry of Health



Source: Department of Planning and Health Information (1999)