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## **APPENDIX**

## APPENDIX 1

### Costs and Benefit Calculation

#### 1.1 Incremental cost

##### 1.1.1 Incremental Equipment Cost

Equipment bought after implementing network					
Item	Amount	Price/Item	Total Price	AF	Annual Cost
Comp. Table model 1	2	3,800.00	7,600.00	3.97	1,913.88
Comp. Table model 2	2	2,782.00	5,564.00	3.97	1,401.16
Printer table	2	1,700.00	3,400.00	3.97	856.21
Electric typewriter	1	29,960.00	29,960.00	3.97	7,544.70
Packlink	1	2,500.00	2,500.00	3.97	629.56
Black Chair	2	1,284.00	2,568.00	3.97	646.69
Electric fan	3	700.00	2,100.00	3.97	528.83
Electric pot	1	1,000.00	1,000.00	3.97	251.83
Electric pan	1	500.00	500.00	3.97	125.91
Computer	2	40,000.00	80,000.00	3.97	20,146.06
Total Equipment Cost for the year 1994					34,044.82

Price/Item is the current value of each item in the year 1994.

AF is the annualizing factor at useful life = 5 years and discount rate = 10%.

Annual cost is the cost of each item for the year 1994.

### 1.1.2 Incremental Personnel Cost

#### - Full time personnel

Salaries and other benefits in 1994 for social security office staff who are employed after implementation the contracting-out are equal to 221,022.63 baht.

#### - Shared personnel

Dr. Cheirnchai's salary and benefits in 1994 = 177,475.20 baht.

Normal office hours for government officers = 2,280 hours/year.

According to normal office hours, then salary and benefits in 1994  
= 77.84 baht/hour.

Dr. Cheirnchai's office hours in 1992 and 1994 = 2,846.4 hours,

including , social security tasks = 2,311.2 hours

other tasks = 553.2 hours.

So, real salary and benefits for social security tasks should be equal to 179,903.8 bath ( $2,311.2 \times 77.84$ ), but in 1994 the number of Nopparat Rajathanee Hospital's registered insured workers increased from the hypothetical number of 41,080 persons (97.8%). That means the extent of tasks increase by 97.8%, an incremental cost equal to 175,945.91 baht ( $179,903.8 \times 97.8\%$ ).

The calculation of Miss Pongsri's personnel cost was conducted by the same process of that for Dr. Cheirnchai. Her salary and benefits in 1994 were 55.79 baht/hour, social security tasks were 2,566.8 hours/year and real salary and benefits were 127,200 baht/year. Thus her incremental personnel cost is 140,327.46 baht.

#### - Supported personnel

In 1994 there were 4 meetings for social security tasks and 102 executive staff attended those meetings. The allowance for a meeting is 200 baht per person, thun incremental cost for supported staff was 20400 baht ( $200 \times 102$ ).

Then, total incremental personnel cost =  $221,022.63 + 175,945.91 + 140,327.46 + 20400$

= 557.696 baht

### 1.1.3 Electricity Cost

Electricity Cost of Social Security Office of Nopparat Rajathanee Hospital					
Item	No.	watt/ Item	Total watt	Time*	Unit**
Photocopy machine	1	1,000	1,000	2	2.00
Electric Typewriter	1	50	50	4	0.20
Computer	5	900	4,500	2	9.00
Printer	1	50	50	2	0.10
Fax	1	50	50	2	0.10
Radio 1	1	400	400	4	1.60
Radio 2	1	350	350	4	1.40
Ventilator Fan 6"	2	45	90	2	0.18
Ventilator Fan 10"	2	45	90	2	0.18
Electric Pot	1	500	500	4	2.00
Electric Pan	1	500	500	2	1.00
Fluorescent 40 watts	7	40	280	2	0.56
Fluorescent 20 watts	5	20	100	2	0.20
Electric Fan	3	45	135	6	0.81
Total Electric power/day (unit)					19.33

Total Electricity power/month ( 24 office days ) = 463.92 units

Total Electricity Cost/month ( 1 unit = 3 baht ) = 1,391.76 baht

Total Electricity Cost/year (increased from 1992) = 16,701.12 baht

\*Time = Operating time of electric equipment increased from 1992

\*\*Unit = Electric power used ( 1 unit = 1 kW/hr. )

### 1.1.4 Treatment Charges Paid to Networks

Treatment charges paid to net works	1992	1992 *	1994	INC
Public networks	6,707,356	8,115,901	2,588,427	-5,527,474
Private net works			16,777,580	16,777,580
Supra-contractors	218,604	264510.8	1,766,018	1,501,507

1992 \* = present value (1994 value)

Treatment charges paid to public networks have a minus sign, that means this cost can be saved. Then it should be put in the benefit side. Other components which have positive sign mean incremental costs, all of them were included in the cost component.

## 1.2 Incremental Monetary Benefits

### 1.2.1 Increasing capitation payment from the national social security office

Hypothetical number of insured workers registered with Nopparat Rajathanee Hospital is 41,999 persons.

The real number is 83,079 persons, and excess of 41,080 persons.

Capitation payment from the national social security office= 700 baht/person  
 = 28,756,000 bath

2.5% contribution to the Ministry of Public Health social security fund.

So: Real incremental revenue = 28,037,100.00 baht.



### 1.2.2 Potential cost saving

#### - Cost saving in out-patient expenditure

Situation	OPD Utz. Rate	No. of Insured.	Exp. / visit	Total Exp.
Hypothetical	0.214	41,999.00	221.79	1,993,401.06
Real	0.128	83,079.00	221.79	2,358,539.70
Cost Saving =				-365,138.64

#### - Cost saving in in-patient expenditure

Situation	IPD Utz. Rate	No. of Insured.	Exp. / day	Total Exp.
Hypothetical	0.05	83,079.00	639.33	2,761,974.65
Real	0.07	41,999.00	639.33	1,879,585.45
Cost Saving =				-882,389.20

Cost saving in both out-patient and in-patient department shown negative signs, that means they cannot be saved. Thus all of them should be added into the cost component.

## APPENDIX 2

### Questionnaire

Original English version of questions which were translated into Thai.

#### 2.1 Questionnaire for Contracted Private Networks

Please put (/) and fill in the blank space for the appropriate answer .

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1. What is the characteristic of your health facility ?

- ..... Private Hospital
- ..... Private Poly-Clinic
- ..... Private Solo-Clinic

2. Regarding the network of Nopparat Rajathanee Hospital, is it important for your clinic?,

why ?

- ..... Yes.
- ..... No.

Because.....

3. Are the payment rates for contracted clinics appropriate ?

- ..... Yes.
- ..... No. what is it should be ?.....

If "not", why do you still belong to the network ? .....

.....

4. How long do your clinics have to wait for repayment from Nopparat Rajathanee Hospital ?

- within.....one week, .....two weeks, .....three weeks, .....four weeks
- .....more than four weeks.

What about the waiting time ?

..... suitable, ..... has to be improved, such as.....

.....

6. What about the payments from other main-contractors when compared with Nopparat Rajathanee Hospital ?

..... Higher, ..... equal, ..... lower.

7. Are you satisfied with Nopparat Rajathanee main-contractor's regulations ?

..... Yes.

..... have to be improved, such as .....

.....

8. What are the times for your clinic's office hours ?

on..... from..... to.....

on..... from..... to.....

on..... from..... to.....

9. How many insured patients visit your clinic per day ?

..... visit / day

10. How many baht for repayments do you receive from Nopparat Rajathanee main-contractor, per month ?

..... < 10,000 baht, ..... 10,000-50,000 baht,

..... 50,001-100,000 baht,..... > 100,000 baht per month.

## 2.2 Questionnaire for Registered Enterprises

Please put ( / ) and fill in the blank space for the appropriate answer .

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1. Position of person who gives the response:

- ..... owner of enterprise.
- ..... manager of ..... department.
- ..... foreman
- ..... other .....

2. According to the social security scheme, when you selected the main-contractor for employees, and you consider Nopparat Rajathanee Hospital as the first choice ?

- ..... Yes.
- ..... No, the first choice is .....

3. When was your enterprise registered with Nopparat Rajathanee Hospital ?  
in 19.....

4. Do you have other main-contractors for your employees ?

- ..... No, only Nopparat Rajathanee Hospital.
- ..... Yes, those are 1. ....
- 2. ....

5. Why did you select Nopparat Rajathanee Hospital as the main-contractor for your employees ?

- ..... a. The hospital locates near you factory.
- ..... b. The hospital has private networks available.
- ..... c. The hospital has quality of services better than other hospitals.
- ..... d. You got some specific benefits from the hospital.
- ..... e. You have individual relationship with some administrators of the hospital.
- ..... f. You did not know that there were other main-contractor available.
- ..... g. Other reason .....

6. Which procedures did you use to select the main-contractor for your employees ?

- ..... a. You selected by your own opinion.
- ..... b. The enterprise's committees prefer to select.
- ..... c. Your employees were asked for their needs.
- ..... d. Other .....

7. What about the quality of health services at contracted private clinics  
(of Nopparat Rajathanee main-contractor) ?

Service	very good	good	fairly good	poor
1. Waiting Time				
2. Treatment Time				
3. Health Teaching From Health Personnel				
4. Sufficient Health Personnel				
5. Sufficient Medical and Official Equipment				
6. Sufficient Available Office Hours.				
7. The Relationship of Official and Health Personnel				
8. Traveling Time and Travel Expenditure.				
9. Overall Satisfaction				

where: in questions No. 7, 8 and 10 ;

very good means you are very satisfy with the quality of services.

good means you are satisfied with the quality of services.

fairly good means you are not so satisfied with the quality of services.

poor means you are not satisfied with the quality of services.

\*\* The questions No. 8 and 9 are only for the enterprises which has been registered with Nopparat Rajathanee Hospital since 1992.\*\*

8. What about quality of services at Nopparat Rajathanee Hospital after  
implementing the network compared with before implementation of the network ?

Service	very good	good	fairly good	poor
1. Waiting Time				
2. Treatment Time				
3. Health Teaching From Health Personnel				
4. Sufficient Health Personnel				
5. Sufficient Medical and Official Equipment				
6. Sufficient Available Office Hours.				
7. The Relationship of Official and Health Personnel				
8. Traveling Time and Travel Expenditure.				
9. Overall Satisfaction				

9. After the hospital has implemented the network, what about the health service  
utilization rates of your employees ?

..... reduced, because .....

..... increased, because .....

\*\* The question No.10 is only for enterprises which have been registered with the hospital since 1994\*\*

10. What about the quality of health services at Nopparat Rajathanee Hospital ?

Service	very good	good	fairly good	poor
1. Waiting Time				
2. Treatment Time				
3. Health Teaching From Health Personnel				
4. Sufficient Health Personnel				
5. Sufficient Medical and Official Equipment				
6. Sufficient Available Office Hours.				
7. The Relationship of Official and Health Personnel				
8. Traveling Time and Travel Expenditure.				
9. Overall Satisfaction				

11. Please address the name of the top five contracted private clinics which are the most preferred among your employees.

- 1 .....
- 2 .....
- 3 .....
- 4 .....
- 5 .....

12. Which private clinics, would you like to be contracted for the network ?

- 1 .....
- 2 .....
- 3 .....
- 4 .....
- 5 .....

## CURRICULUM VITAE

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