



REFERENCES

- Blaug, M. (1971). The Rate of Return to Investment in Education in Thailand. Bangkok: NEC.
- Bloom, D.E. and Godwin, P. (1997). The Economic of HIV and AIDS: The cases of South and South East Asia. United Nations Development Programme, New Delhi, India.
- Bloom D.E. and Lyons J.V. (1993). Economic Implications of AIDS in Asia. UNDP, New Delhi, India.
- Creese, A. and Parker, D. (1994). Cost Analysis in Primary Health Center: A Training Manual for the Programme Managers, WHO, Geneva.
- Donalson, D., Punnarunothai, S. and Yongcharoensathien, V. (1998). Health Finance in Thailand. Health Financing and Management Study Project.
- Drummond, M.F. (1980). Principle of economic appraisal in health care. US New York: Oxford University Press.
- Drummond, M.F. et al. (1997). Methods for the Economic Evaluation of Health Care Programmes. Oxford New York Toronto: Oxford University Press.
- English, J.M. (1915). Project Evaluation: A Unified Approach for the Analysis of Capital Investments. New York: Macmillan PLC.
- Epidemiology Department. (1998). Quarterly AIDS Epidemiological Report.
- Gittinger, J.P. (1984). Compounding and Discounting Tables for Project Analysis with a Guide to Their applications. The Economic Development Institute of the World Bank, The Johns Hopkins University, Baltimore and London.
- Griensven, G.J.P., Surasiengsunk, S. and Panza, A. (1998). The Use of Mortality Statistic as a Prosy Indicator for the Impact of the AIDS Epidemic on the Thai Population. Institute of Population Studies, Chulalongkorn University, Bangkok.
- Indaratana, K. et al. (1997). Developing Essential health Service Package. Chulalongkorn University, Bangkok, Thailand.
- Intajuk, S. (1996). Cost and Benefit Analysis of Contracting Out Primary Medical Care to Private Clinics under Social Security Scheme. M.Sc. Thesis, Chulalongkorn University, Bangkok.
- Jirachaisopit, N. (1994). Cost-benefit of Dental Services for Health Center. M.E. Thesis, Chulalongkorn University, Bangkok.

- Kaewsonthi, S. et al. (1983). Cost and Performance Appraisal of Malaria Surveillance and Monitoring Measure, Final Report..
- Kahssay, HM., Taylor, M.E. and Berman, P.A. (1998). Community Health Workers: The Way Forward. WHO, Geneva.
- Kongsin, S. (1999). Policies to Mitigate the Economic Impact of Chronic HIV Morbidity on Households in Northern Thailand. A Research Proposal Submitted to the Ethical Review Committee for Research on Human subjects, MOPH.
- Lamboray, J.L. et al. (1998). HIV/AIDS and Health Care Reform: Making Health Care Systems Respond Effectively to HIV and AIDS. Health Care Reform and HIV, Office of Health Care Reform-AIDS Division, MOPH Thailand-UNAIDS.
- Lamboray, J.L., Laughhin, J.M., Niimi, R. and Knippenberg, R. (1997). Health Centers: from Responsibility to Accountability. Studies in Health Service Organization and Policy.
- Leesmith, V. and Punnarunotai, S. (1998). Literature Review of the Medical Assistance for the Indigent. Thailand Health Research Institute, National Health Foundation.
- Lertchayantee, S. (1998). The Analysis on Treatment Expenditure of PWA in IPD Phaya Hospital. Thailand.
- Masaki, E. (1997). Cost Analysis of Hospice Care for HIV/AIDS Patients in Thailand: A Community-based Model of HIV/AIDS Care. M.P.H. Thesis, Mahidol University, Bangkok.
- Mhuengkum, N. (1997). Impact of HIV/AIDS on Household Consumption Reallocation and Economic Growth in Thailand. M.Sc. Thesis, Chulalongkorn University, Bangkok.
- Min, T. (1996). Economic Burden of HIV/AIDS in Myanmar: Provider Perspective. M.Sc. Thesis, Chulalongkorn University, Bangkok.
- Muangsrimuengdee, U. (1994). Cost-effectiveness Analysis of Treatment of AIDS Related Complexes with Zidovudine (AZT). M.E. Thesis, Chulalongkorn University, Bangkok.
- Napapunsakul, W. (1992). Cost and Effectiveness of Using Multiply-drug Therapy Regimen (MDT) in leprosy Patients. M.E. Thesis, Chulalongkorn University, Bangkok.
- Pindyck, R.S. and Rubinfeld, D. (1992). Microeconomics. New Jersey: Prentice-Hall International, Inc.

- Philipson,T. and Poner R.A. (1993). Private Choices and Public Health: The AIDS Epidemic in an Economic Perspective. Harvard University, London, England.
- Pitayanon, S., Kongsin, S. and Junjaroen, W.S. (1994). Economic Impact of HIV/AIDS Mortality on Households in Thailand: Study on the Economic Implication of the HIV/AIDS Epidemic in Selected DMCs. Bangkok. Thailand.
- Prommool, V. et al. (1995). "Forecasting the Medical Care of AIDS in Bamrasnadura Hospital". Journal of Health Science, Vol.4 No.2: 154-162.
- Punnarunotai, S. and Wongkanaratantanakul, P. (1997). Estimating Expenditure on the Basic Medical Benefit Package: expansion of existing welfare to the large population. Thailand Health Research Institute, National Health Foundation.
- Rerkngam, S. et al. (1992). Hospital Care Cost Analysis of Patients with AIDS and AIDS Related Complex. Ministry of Public Health Hospital, AIDS Division, MOPH.
- Reynolds, J. (1993). Cost Analysis. Aga Khan Foundation, Geneva and Thongchai S Supanuchart, Somboon Vacharotai Foundation. Bangkok.
- Ruffin, R.S. and Gregory, P.R. (1997). Principles of Economics. USA: Addison-Wesley Educational Publishers.
- Simon, D.F., Hardly, V. and Tolly, K. (1995). The Economic and social Impact of AIDS in Europe. London: Cassell PLC.
- Soucat, A. et al. (1997). "Affordability, Cost – Effectiveness and Efficiency of Primary Health Care: The Bamako Initiative Experience in Benin and Guinea." Int. Health Plann.- MGMT. Vol.12, No.1: S81- S108.
- Suknintapong, T., Suntayakorn, S. and Sringsam, K. (1996). The Unit Cost Among Khamphangphet Health Center Service 1995. Khamphangphet Provincial Health Office.
- Thailand. 1996. Research Project the Economic Remuneration Rate of Investment in Education. Office of the National Education Commission Prime Ministry's Department.
- Thaineua, V. et al. (1998). "From Efficacy to Effectiveness: Routine Prevention of Mother to Child HIV Transmission by A short course of Zidovudine in Northern Thailand." South East Asia Journal of Tropical Medicine and Public Health.

- Suksiriserikul, S. (1998). Determination of Basic Essential Health Care Package: Theory and Literature Review. Thammasart Campus, Nakorn Pathom, Thailand.
- Takeuchi, M. (1998). Report of Activities. JICA Project for Model Development of comprehensive HIV/AIDS Prevention and care at AIDS Action Center, Phaya Provincial Health Office, Thailand.
- Tarimo, E. (1997). Essential Health Service Package: User, Abuse and Future Directions. World health organization, Division of Analysis, Research and Assessment.
- The World Bank. (1993). World Development Report 1993 Investing In Health. Oxford University, Washington, D.C.
- UNAIDS et al (1998). HIV and Health Care Reform in Phayaao From Crisis to Opportunity.
- Vacharak, P. (1996). Cost Analysis of Health Card Services for Health Card Price Determination. M.E. Thesis, Chulalongkorn University, Bangkok.
- Viravaidya, M. and Obremskey, S.A. 1993. "The Economic Impact of AIDS on Thailand" in David E. Bloom and Joyce V. Lyons, eds. (1993). Economic Implication of AIDS in Asia. UNDP. New Delhi, India.
- Wongboonsin, K, et al. (1997). Demographic Impact of the HIV/AIDS Epidemic in Thailand: Mathematical and Statistical Projection. Institute of Population Studies, Chulalongkorn University.
- Yang, B. M. (1991). "The Economic Impact of AIDS on the Republic of Korea" in Bloom, E.D. and Joyce V.L. (1993). Economic Implications of AIDS in Asia. UNDP, New Delhi.

Appendix A

Capital Cost

Table A.1 Calculation of Capital Cost

Items	Original cost	Year	Current cost	Useful	Annualization	Annual cost	Used for specific	Annual cost for HIV/AIDS
	(Baht)	used	(Baht)	life (year)	factor	(Baht)	activities	activities (Baht)
1.Building (1)	437,000	21	3,233,909	25	9.077	356,275		6,358
2.Equipment (25)								
2.1 Electric fan (1)	1,500	2	1,815	5	3.791	479	curative care	9
2.2 Aluminium bookcase (1)	2,600	4	3,807	5	3.791	1,004	curative care	18
2.3 Iron bookcase (1)	2,400	3	3,194	5	3.791	843	HHC & promotion	15
2.4 Iron bookcase (1)	1,850	2	2,239	5	3.791	590	MIS, paperwork	11
2.5 Iron bookcase (1)	2,580	1	2,838	5	3.791	749	MIS, paperwork	13
2.6 Iron bookcase (1)	2,550	1	2,805	5	3.791	740	MIS, paperwork	13
2.7 Wood book-shelf (1)	11,000	1	12,100	5	3.791	3,192	MIS, paperwork	57
2.8 Quilt chair (3)	3,600	-	3,600	5	3.791	950	MIS, paperwork	17
2.9 Television14" (1)	4,700	-	4,700	5	3.791	1,240	MIS, paperwork	22
2.10 Stereo (1)	7,900	-	7,900	5	3.791	2,084	MIS, paperwork	38
2.11 Computer (1)	39,900	-	39,900	5	3.791	10,525	MIS, paperwork	188
2.12 Printer (1)	12,000	-	12,000	5	3.791	3,165	MIS, paperwork	56
2.13 Computer table (1)	2,500	-	2,500	5	3.791	659	MIS, paperwork	12
2.14 Cooling machine (1)	3,400	3	4,525	5	3.791	1,194	HE, promotion	21
2.15 Refrigerator (1)	6,500	1	7,150	5	3.791	1,886	curative care	34

Table A.1 (Continued)

Items	Original cost (Baht)	Year used	Current cost (Baht)	Useful life (year)	Annualization factor	Annual cost (Baht)	Used for specific activities	Annual cost for HIV/AIDS activities (Baht)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2.16 Transformer 13.8 v. (1)	1,250	3	1,664	5	3.791	439	MIS, paperwork	8
2.17 Electric limestone scrape (1)	20,000	4	29,282	5	3.791	7,724	curative care	138
2.18 Medical lantern (1)	18,900	1	20,790	5	3.791	5,484	curative care	98
2.19 Weighting-high machine (1)	14,000	4	20,497	5	3.791	5,407	MCH	96
2.20 Blood pressure machine (1)	2,300	4	3,367	5	3.791	888	curative care	16
2.21 Destroy needle machine (1)	5,000	4	7,321	5	3.791	1,931	curative care	34
2.22 Sugar blood test machine (1)	7,100	1	7,810	5	3.791	2,060	curative care	37
2.23 Portable autoclave (1)	130,000	1	143,000	5	3.791	37,721	curative care	673
2.24 Microscope (1)	40,000	-	40,000	5	3.791	10,551	curative care	188
2.25 Hematocrit-test machine (1)	15,200	-	15,200	5	3.791	4,009	curative care	72
Total cost of equipment	303,530		400,004		3.791	105,514		1,883
3.Vehicle								
3.1Motorcycles (Honda dream)(1)	35,000	2	42,350	10	6.145	6,892		123
3.2Motorcycles (Yamaha mate)(1)	35,000	1	38,500	10	6.145	6,265		112
Total cost of vehicle	70,000		80,850		6.145	13,157		235
Total capital cost	810,530		3,714,763			474,946		8,475

Note: Proportion used for HIV/AIDS = 1.8%, discount rate = 10%

Table A.2 Annual Human Training Cost

Unit: Baht

Items	Startup	Annual cost of each year for ten years									
		1 st year	2 nd year	3 rd year	4 th year	5 th year	6 th year	7 th year	8 th year	9 th year	10 th year
Human capital cost											
1. Training counselling	24,480	2,448	2,570	2,599	2,834	2,976	3,124	3,281	3,445	3,617	3,798
2. Vision building	840	84	88	93	97	102	107	112	118	124	130
3. Coordination meeting	1,680	168	176	185	194	204	214	225	236	248	260
4. Rolling planning process	4,200	420	441	463	486	510	536	563	591	621	652
5. Information sharing	1,260	126	132	139	146	153	161	169	177	186	195
Total human capital cost	32,460	3,246	3,407	3,479	3,757	3,945	4,142	4,350	4,567	4,796	5,035
Labor cost (recurrent cost)	2,880	2,880	2,880	2,880	2,880	2,880	2,880	2,880	2,880	2,880	2,880
Total human training cost	35,340	6,126	6,287	6,359	6,637	6,825	7,022	7,230	7,447	7,676	7,915

Note: Discount rate = 5%, useful life = 10 years

Appendix B
Time Allocation of Health Personnel

Table B.1 Time Allocation of Health Personnel by Activities

Time (min) \ Personl	1 st staff	% of 1 st	2 nd staff	% of 2 nd	3 rd staff	% of 3 rd	Total time	Proportion of total time	Average time	Proportion of Average time
									Average time	Average time
<i>...*100/office time</i>										
Curative care	5,667	4.7	11,150	9.3	30,777	25.6	47,594	13.2	15,865	13.2
MCH	14,440	12.0	4,890	4.1	7,840	6.5	27,170	7.5	9,057	7.5
Home visit	3,090	2.6	8,650	7.2	5,040	4.2	16,780	4.7	5,593	4.7
MIS, paper work	62,078	51.7	61,070	50.9	38,605	32.2	161,753	44.9	53,918	44.9
HE, promotion	10,060	8.4	11,740	9.8	15,265	12.7	37,065	10.3	12,355	10.3
Total working time	95,335	79.4	97,500	81.3	97,527	81.3	290,362	80.7	96,787	80.7
Personal time	24,665	20.6	22,500	18.8	22,473	18.7	69,638	19.3	23,213	19.3
Total time(250office day)	120,000	100	120,000	100	120,000	100	360,000	100	120,000	100
<i>...*100/work time</i>										
HIV-working time	1,314	1.4	2,435	2.5	7,229	7.4	10,979	3.8	3,660	3.8
Non-HIV-working time	94,021	98.6	95,065	97.5	90,298	92.6	279,383	96.2	93,128	96.2
Total working time	95,335	100	97,500	100	97,527	100	290,362	100	96,787	100

Table B.2 Time Allocation of Health Personnel by HIV/AIDS Activities Specified to HIV and Non-HIV

Time (min) \ Person	1 st aff	% of 1 st	2 nd aff	% of 2 nd	3 rd aff	% of 3 rd	Total time	% of total	Average time	% of average time
Curative care	5,667	4.7	11,150	9.3	30,777	25.6	47,594	13.2	15,865	13.2
Curative care (HIV)	417	0.3	375	0.3	556	0.5	1,348	0.4	449	0.4
Curative care (Non-HIV)	5,250	4.4	10,775	9.0	30,221	25.2	46,246	12.8	15,415	12.8
MCH	14,440	12.0	4,890	4.1	7,840	6.5	27,170	7.5	9,057	7.5
MCH (HIV)	60	0.1	60	0.1	60	0.1	180	0.1	60	0.1
MCH (Non-HIV)	14,380	12.0	4,830	4.0	7,780	6.5	26,990	7.5	8,997	7.5
Home visit	3,090	2.6	8,650	7.2	5,040	4.2	16,780	4.7	5,593	4.7
Home visit (HIV)	120	0.1	60	0.1	5,040	4.2	5,220	1.5	1,740	1.5
Home visit (Non-HIV)	2,970	2.5	8,590	7.2	-	-	11,560	3.2	3,853	3.2
MIS, paper work	62,078	51.7	61,070	50.9	38,605	32.2	161,753	44.9	53,918	44.9
MIS, paper work(HIV)	278	0.2	1,500	1.3	639	0.5	2,417	0.7	806	0.7
MIS, paper work(Non-HIV)	61,801	51.5	59,570	49.6	37,966	31.6	159,337	44.3	53,112	44.3
HE, promotion	10,060	8.4	11,740	9.8	15,265	12.7	37,065	10.3	12,355	10.3
HE, promotion (HIV)	440	0.4	440	0.4	935	0.8	1,815	0.5	605	0.5
HE, promotion (non-HIV)	9,620	8.0	11,300	9.4	14,330	11.9	35,250	9.8	11,750	9.8
Total working time	95,335	79.4	97,500	81.3	97,527	81.3	290,362	80.7	96,787	80.7
Personal time	24,665	20.6	22,500	18.8	22,473	18.7	69,638	19.3	23,213	19.3
Total time(250 office day)	120,000	100	120,000	100	120,000	100	360,000	100	120,000	100

Appendix C

Supply Cost

C.1 Calculation of Supply Cost

Unit: Baht

No.	Oral medicine	volume/pack (tab or cap)	for used (pack)	cost/pack	total cost	used for HIV (tab)	cost of HIV
1	Alumina and Magnesia	1,000	8	250	2,000	40	10
2	Aminophylline 100 mg.	1,000	3	122	366	20	2
3	Amoxycilline (cap) 250 mg.	1,000	4	1,500	6,000	42	63
4	Aspirin 300 mg.	1,000	2	71	142	0	-
5	Bisacodyl	500	3	67	201	0	-
6	Chorpapamine 4 mg.	500	10	30	300	498	30
7	Cimethidine 400 mg.	500	1	650	650	0	-
8	Coccilla	500	1	400	400	40	32
9	Cotrimoxazole fort	500	3	600	1,800	110	132
10	Dextromethophan 15 mg	500	21	185	3,885	331	122
11	Diazepam 2 mg	500	11	47	517	80	8
12	Dimenhydinate 50 mg.	1,000	4	150	600	214	32
13	Domperidone (Metoclopramide)	500	1	200	200	14	6
14	Ferrus sulphate	1,000	6	93	558	30	3
15	Flatulance	1,000	1	200	200	20	4
16	Hydrocholinothaiazide	500	11	130	1,430	-	-
17	Indomethocine (cap) 25 mg.	1,000	3	300	900	20	.6
18	Mebendazole 100 mg.	500	1	300	300	0	-
19	Metronidazole 400 mg	1,000	1	750	750	30	23
20	MTV	1,000	2	150	300	0	-
21	Niclosamide 500 mg	100	6	125	750	0	-
22	Oxyphencyclomine (Pepticin)	1,000	3	220	660	68	15
23	Paracetamol 325 mg.	1,000	5	140	700	0	-
24	Paracetamol 500 mg.	1,000	39	150	5,850	648	97
25	Pen V 125 mg.	500	8	186	1,488	-	-
26	Pen V 250 mg.	500	12	329	3,948	98	64
27	Reserpine 0.25 mg	1,000	10	54	540	0	-
28	Sodamint	1,000	4	39	156	20	1
29	Terbutaline 2.5 mg	1,000	1	450	450	0	-
30	Tetracycline 250 mg	1,000	7	483	3,381	196	95
31	Vitamin AD (cap)	1,000	1	150	150	150	23
32	Vitamin B1-6-12	1,000	4	340	1,360	110	37
33	Vitamin Bco	1,000	7	103	721	200	21
34	Vitamin C	1,000	3	100	300	60	6
35	Alumina & Manesia 240 cc.	1 bottle/pack	224	16	3,584	5	80

C.1 (Continued)

Unit: Baht

No.	Oral medicine	volume/pack (tab or cap)	for used (pack)	cost/pack	total cost	used for HIV (tab)	cost of HIV
36	Amoxycilline dry 60 cc	1 bottle/pack	120	17	2,040	2	34
37	Benadryl syrup 60 cc	1 bottle/pack	10	12	120	5	60
38	Brown mixture (M.tussis) 60 cc	1 bottle/pack	50	4.5	225	2	9
39	Carminative mixture 180 cc	1 bottle/pack	220	12	2,640	14	168
40	Chlorpheniramine sus. 60 cc	1 bottle/pack	600	5	3,000	14	70
41	Coccilla syrup 60 cc	1 bottle/pack	50	13.5	675	9	122
42	Cotrimazole suspension 60 cc	1 bottle/pack	30	9	270	0	-
43	Domparidone suspension 30 cc	1 bottle/pack	54	15	810	0	-
44	Erythomycine dry syrup 60 cc	1 bottle/pack	55	18	990	0	-
45	Glyceryl Guaiacolate syrup 60 cc	1 bottle/pack	69	7.8	534.8	0	-
46	Metronidazole suspension 30 cc	1 bottle/pack	60	12	720	0	-
47	MTV syrup 60 cc	1 bottle/pack	40	12.5	500	0	-
48	Paracetamol 60 cc	1 bottle/pack	520	10	5,200	13	130
49	Penicilline dry syrup 60 cc	1 bottle/pack	210	9	1,890	4	36
50	Salbutalmol syrup 60 cc	1 bottle/pack	31	15	465	1	15
51	Siltussin syrup 60 cc	1 bottle/pack	24	8	192	10	80
52	Oreda	1 bottle/pack	850	2	1,700	15	30
53	ORS	1 bottle/pack	50	3.8	187.5	9	34
	Antibacteria and external used						
54	Alcohol 70% 450 cc	1 bottle/pack	20	25	500	10	250
55	Ammonia 450 cc	1 bottle/pack	2	32	64	0	-
56	Boric acid 450 cc	1 bottle/pack	2	14	28	0	-
57	Burn and scale mixture 60 cc	1 bottle/pack	10	7	70	1	7
58	Calamine lotion 60 cc	1 bottle/pack	131	4.5	589.5	3	14
59	Chloramphenical eye/ear drops	1 bottle/pack	0	9	0	1	.9
60	Cotrimazole cream 500 mg.	1 bottle/pack	3	560	1,680	300 mg	336
61	Gential violet solution 30 cc	1 bottle/pack	60	3	180	3	9
62	Gynecon	1 tab/pack	100	3.5	350	6	21
63	Hydrogen peroxide 6% 450 cc	1 bottle/pack	1	24	24	1	24
64	NSS 1000 cc	1 bottle/pack	7	10	70	2	20
65	Povidine scrub 1000 cc	1 bottle/pack	1	330	330	0	-
66	Povidine solution 1000 cc	1 bottle/pack	1	110	110	0	-
67	Savlon 1000 cc	1 bottle/pack	1	200	200	1	200
68	Sodium Hypocholrite	1 bottle/pack	30	15	450	30	450
69	Tetracycline eye ointment	1 bottle/pack	40	5	200	0	-

C.1 (Continued)

Unit: Baht

No.	Oral medicine	volume/pack (tab or cap)	for used (pack)	cost/pack	total cost	used for HIV (tab)	cost of HIV
70	Triam. Cream 0.1% 500 gm	1 bottle/pack	4	600	2,400	290 mg	348
71	Xanaline eye drops	1 bottle/pack	125	21	2,625	4	84
	Inject medicine						
72	Adrenaline inject	1 amp/pack	30	2.8	84	0	-
73	Chlorpheniramide inject	1 amp/pack	30	2	60	1	2
74	D5N 1000 cc	1 bottle/pack	7	37	259	1	37
75	Glucose inject 50% 20 cc	1 amp/pack	20	5	100	1	5
76	Hyoscine - n butyromide inject	1 amp/pack	30	7	210	1	7
77	Lidocain HCL 2% in 50 cc	1 vial/pack	1	27	27	0	-
78	Paracetamol inject 2 cc	1 amp/pack	570	3	1,710	5	15
	Medical supplies						
79	IV set	1 set/pack	10	15	150	1	15
80	Scalp vein no 23	1 set/pack	7	8	56	1	8
81	Med-pack 7 x 10 cm	100 set/pack	105	13	1,365	3	39
82	Gauze 90 x 900 cm	1 role/pack	3	520	1,560	1	520
83	Transpore 900 x 1020 cm	1 role/pack	3	360	1,080	1	360
84	Cotton wool 450 gm.	1 role/pack	3	42	126	1	42
85	Needle dispose no 19	100 set/pack	3	125	375	20	2,500
86	Needle dispose no 23	100 set/pack	9	91	819	18	1,638
87	Needle dispose no 24	100 set/pack	16	75	1,200	2	150
88	Syring dispose 2 cc	100 set/pack	1	190	190	19	3,610
89	Syring dispose 2.5 cc	100 set/pack	9	190	1,710	0	-
90	Syring dispose 3 cc	100 set/pack	2	200	400	0	-
91	Syring dispose 5 cc	100 set/pack	8	230	1,840	0	-
92	Glove dispose no.M	100 set/pack	18	130	2,340	3	390
93	Scalpel no 11	1 set/pack	5	10	50	0	-
95	Termometer	1 set/pack	3	40	120	1	40
					93,398		9,312

Source: Tambon Lor Health Center

C.2 Project Support Medicine and Medical Supplies for HIV/AIDS from JICA

Unit: Baht

No	Items	Volume/pack	Received	cost/pack	total cost
1	CPM tab	100's	5	7	35
2	Paracetamol 500 mg.	100's	5	20	100
3	Dextromethophan tab	500's	1	203	203
4	Bco	1000's	1	103	103
5	MTV	1000's	1	150	150
6	Para compound tab	1000's	1	380	380
7	Dissowel tab	1000's	1	1,680	1,680
8	FeSO4 tab	1000's	1	93	93
9	Clotrimazole cream	15g.	5	35	175
10	Prednisolone	15g.	5	15	75
11	Alcohol solution 70%	180ml.	5	10	50
12	Lysol solution	450ml.	5	50	250
13	Gentian violet	30ml.	5	7.5	38
14	Brown mixture	180ml.	5	14	70
15	Providine solution	30ml.60ml.	5	8	40
16	Calamine lotion	100's	5	17	85
17	Glove no. S,M,L		5	130	650
18	Small towel		10	10	100
19	Towel		10	80	800
20	Guaze 3" x 3"		5	60	300
21	Cotton bud	100's	5	22.5	113
22	Black garbage 9 x 18		3	45	135
23	Whiter watch (highter)	600ml.	5	13.8	69
24	SMW		2	440	880
25	Plastic bottle	240ml.	10	0.3	3
26	Mask	100's/pack	20	94	1,880
27	Cough syrup		5	12	60
28	Syring 3 cc	100's/pack	4	200	800
29	Syring 5 cc	100's/pack	1	230	230
30	Needle	100's/pack	5	91	455
	Total				10,000

C.3 Medicine and Medical Supplies for Family Planning

No.	Items	cost/pack	volume used	Unit: Baht	
				total cost	HIV cost
1	Ovastat (tab)	9	902	8,118	-
2	Oval (tab)	9	249	2,241	-
3	Planosex (Preg test)	30	52	1,560	-
4	Uristix	3	90	270	-
5	Depogeste (inject)	25	498	12,450	-
6	Anna (tab)	9	898	8,082	-
7	Controlan (inject)	25	1	25	-
8	Prevenon (tab)	9	104	936	-
9	Condom (100's/pack)	250	33	8,250	8,250
Total				41,932	8,250

C.4 Medical Supplies for Expanded Program on Immunization

No.	Items	cost/pack	volume used	Unit: Baht	
				total cost	For HIV
1	Hbv	180	45	8,100	
2	DTP	61	34	2,057	
3	OPV	170	57	9,690	
4	Measle	98	12	1,170	
5	TT	20	26	515	
6	DT	29	12	342	
7	G.Measle	47	2	95	
8	BCG	94	4	376	
9	JE	190	53	10,070	
10	MMR	146	4	585	
Total EPI (recorded) = 280 cases				33,000	
Estimated EPI for HIV 5% of total EPI (discuss)= 14 case					4,620

Appendix D
Standard Tables of Annulization Factor
and Capital Recovery Factor

Table D.1 Present Worth of an Annuity Factor or Annualization Factor

Year	PRESENT WORTH OF AN ANNUITY FACTOR— How much 1 received or paid annually for X years is worth today.												PRESENT WORTH OF AN ANNUITY FACTOR— How much 1 received or paid annually for X years is worth today.											
	1%	3%	5%	6%	8%	10%	12%	14%	15%	16%	18%	20%	22%	24%	25%	26%	28%	30%	35%	40%	45%	50%	Year	
1	.990	.971	.952	.943	.926	.909	.893	.877	.870	.862	.847	.833	.820	.806	.800	.794	.781	.769	.741	.714	.690	.667	1	
2	1.970	1.913	1.859	1.833	1.783	1.736	1.690	1.647	1.626	1.605	1.566	1.528	1.492	1.457	1.440	1.424	1.392	1.361	1.289	1.224	1.165	1.111	2	
3	2.941	2.829	2.723	2.673	2.577	2.487	2.402	2.322	2.283	2.246	2.174	2.106	2.042	1.981	1.952	1.923	1.868	1.816	1.696	1.589	1.493	1.407	3	
4	3.902	3.717	3.546	3.465	3.312	3.170	3.037	2.914	2.855	2.798	2.690	2.589	2.494	2.404	2.362	2.320	2.241	2.166	1.997	1.849	1.720	1.605	4	
5	4.853	4.580	4.329	4.212	3.993	3.791	3.605	3.433	3.352	3.274	3.127	2.991	2.864	2.745	2.689	2.635	2.532	2.436	2.220	2.035	1.876	1.737	5	
6	5.795	5.417	5.076	4.917	4.623	4.355	4.111	3.889	3.784	3.685	3.498	3.326	3.167	3.020	2.951	2.885	2.759	2.643	2.385	2.168	1.983	1.824	6	
7	6.728	6.230	5.786	5.582	5.206	4.868	4.564	4.288	4.160	4.039	3.812	3.605	3.416	3.242	3.161	3.083	2.937	2.802	2.508	2.263	2.057	1.883	7	
8	7.652	7.020	6.463	6.210	5.747	5.335	4.968	4.639	4.487	4.344	4.078	3.837	3.619	3.421	3.329	3.241	3.076	2.925	2.598	2.331	2.108	1.922	8	
9	8.566	7.786	7.108	6.802	6.247	5.759	5.328	4.946	4.772	4.607	4.303	4.031	3.786	3.566	3.463	3.366	3.184	3.019	2.665	2.379	2.144	1.948	9	
10	9.471	8.530	7.722	7.360	6.710	6.145	5.650	5.216	5.019	4.833	4.494	4.192	3.923	3.682	3.571	3.465	3.269	3.092	2.715	2.414	2.168	1.965	10	
11	10.368	9.253	8.306	7.887	7.139	6.495	5.938	5.453	5.234	5.029	4.656	4.327	4.035	3.776	3.656	3.543	3.335	3.147	2.752	2.438	2.185	1.977	11	
12	11.255	9.954	8.863	8.384	7.536	6.814	6.194	5.660	5.421	5.197	4.793	4.439	4.127	3.851	3.725	3.606	3.387	3.190	2.779	2.456	2.196	1.985	12	
13	12.134	10.635	9.394	8.853	7.904	7.103	6.424	5.842	5.583	5.342	4.910	4.533	4.203	3.912	3.780	3.656	3.427	3.223	2.799	2.469	2.204	1.990	13	
14	13.004	11.296	9.899	9.295	8.244	7.367	6.628	6.002	5.724	5.468	5.008	4.611	4.265	3.962	3.824	3.695	3.459	3.249	2.814	2.478	2.210	1.993	14	
15	13.865	11.938	10.380	9.712	8.559	7.606	6.811	6.142	5.847	5.575	5.092	4.675	4.315	4.001	3.859	3.726	3.483	3.268	2.825	2.484	2.214	1.995	15	
16	14.718	12.561	10.838	10.106	8.851	7.824	6.974	6.265	5.954	5.668	5.162	4.730	4.357	4.033	3.887	3.751	3.503	3.283	2.834	2.489	2.216	1.997	16	
17	15.562	13.166	11.274	10.477	9.122	8.022	7.120	6.373	6.047	5.749	5.222	4.775	4.391	4.059	3.910	3.771	3.518	3.295	2.840	2.492	2.218	1.998	17	
18	16.398	13.754	11.690	10.828	9.372	8.201	7.250	6.467	6.128	5.818	5.273	4.812	4.419	4.080	3.928	3.786	3.529	3.304	2.844	2.494	2.219	1.999	18	
19	17.226	14.324	12.085	11.158	9.604	8.365	7.366	6.550	6.198	5.877	5.316	4.843	4.442	4.097	3.942	3.799	3.539	3.311	2.848	2.496	2.220	1.999	19	
20	18.046	14.877	12.462	11.470	9.818	8.514	7.469	6.623	6.259	5.929	5.353	4.870	4.460	4.110	3.954	3.808	3.546	3.316	2.850	2.497	2.221	1.999	20	
21	18.857	15.415	12.821	11.764	10.017	8.649	7.562	6.687	6.312	5.973	5.384	4.891	4.476	4.121	3.963	3.816	3.551	3.320	2.852	2.498	2.221	2.000	21	
22	19.660	15.937	13.163	12.042	10.201	8.772	7.645	6.743	6.359	6.011	5.410	4.909	4.488	4.130	3.970	3.822	3.556	3.323	2.853	2.498	2.222	2.000	22	
23	20.456	16.444	13.489	12.303	10.371	8.883	7.718	6.792	6.399	6.044	5.432	4.925	4.499	4.137	3.976	3.827	3.559	3.325	2.854	2.499	2.222	2.000	23	
24	21.243	16.936	13.799	12.550	10.529	8.985	7.784	6.835	6.434	6.073	5.451	4.937	4.507	4.143	3.981	3.831	3.562	3.327	2.855	2.499	2.222	2.000	24	
25	22.023	17.413	14.094	12.783	10.675	9.077	7.843	6.873	6.464	6.097	5.467	4.948	4.514	4.147	3.985	3.834	3.564	3.329	2.856	2.499	2.222	2.000	25	
26	22.795	17.877	14.375	13.003	10.810	9.161	7.896	6.906	6.491	6.118	5.480	4.956	4.520	4.151	3.988	3.837	3.566	3.330	2.856	2.500	2.222	2.000	26	
27	23.560	18.327	14.643	13.211	10.935	9.237	7.943	6.935	6.514	6.136	5.492	4.964	4.524	4.154	3.990	3.839	3.567	3.331	2.856	2.500	2.222	2.000	27	
28	24.316	18.764	14.898	13.406	11.051	9.307	7.984	6.961	6.534	6.152	5.502	4.970	4.528	4.157	3.992	3.840	3.568	3.331	2.857	2.500	2.222	2.000	28	
29	25.066	19.188	15.141	13.591	11.158	9.370	8.022	6.983	6.551	6.166	5.510	4.975	4.531	4.159	3.994	3.841	3.569	3.332	2.857	2.500	2.222	2.000	29	
30	25.808	19.600	15.372	13.765	11.258	9.427	8.055	7.003	6.566	6.177	5.517	4.979	4.534	4.160	3.995	3.842	3.569	3.332	2.857	2.500	2.222	2.000	30	
35	29.409	21.487	16.374	14.498	11.655	9.644	8.176	7.070	6.617	6.215	5.539	4.992	4.541	4.164	3.998	3.845	3.571	3.333	2.857	2.500	2.222	2.000	35	
40	32.835	23.115	17.159	15.046	11.925	9.779	8.244	7.105	6.642	6.233	5.548	4.997	4.544	4.166	3.999	3.846	3.571	3.333	2.857	2.500	2.222	2.000	40	
45	36.095	24.519	17.774	15.456	12.108	9.863	8.283	7.123	6.654	6.242	5.552	4.999	4.545	4.166	4.000	3.846	3.571	3.333	2.857	2.500	2.222	2.000	45	
50	39.196	25.730	18.256	15.762	12.233	9.915	8.304	7.133	6.661	6.246	5.554	4.999	4.545	4.167	4.000	3.846	3.571	3.333	2.857	2.500	2.222	2.000	50	

Table D.2 Capital Recovery Factor

Year	CAPITAL RECOVERY FACTOR— Annual payment that will repay a \$1 loan in X years with compound interest on the unpaid balance.												CAPITAL RECOVERY FACTOR— Annual payment that will repay a \$1 loan in X years with compound interest on the unpaid balance.											
	1%	3%	5%	6%	8%	10%	12%	14%	15%	16%	18%	20%	22%	24%	25%	26%	28%	30%	35%	40%	45%	50%	Year	
1	1.010	1.030	1.050	1.060	1.080	1.100	1.120	1.140	1.150	1.160	1.180	1.200	1.220	1.240	1.250	1.260	1.280	1.300	1.350	1.400	1.450	1.500	1	
2	.508	.523	.538	.545	.561	.576	.592	.607	.615	.623	.639	.655	.670	.686	.694	.702	.719	.735	.776	.817	.858	.900	.924	2
3	.340	.354	.367	.374	.388	.402	.416	.431	.438	.445	.460	.475	.490	.505	.512	.520	.535	.551	.590	.629	.670	.711	.747	3
4	.256	.269	.282	.289	.302	.315	.329	.343	.350	.357	.372	.386	.401	.416	.423	.431	.446	.462	.501	.541	.582	.623	.664	4
5	.206	.218	.231	.237	.250	.264	.277	.291	.298	.305	.320	.334	.349	.364	.372	.379	.395	.411	.450	.491	.533	.576	.618	5
6	.173	.185	.197	.203	.216	.230	.243	.257	.264	.271	.286	.301	.316	.331	.339	.347	.362	.378	.419	.461	.504	.548	.588	6
7	.149	.161	.173	.179	.192	.205	.219	.233	.240	.248	.262	.277	.293	.308	.316	.324	.340	.357	.399	.442	.486	.531	.571	7
8	.131	.142	.155	.161	.174	.187	.201	.216	.223	.230	.245	.261	.276	.292	.300	.309	.325	.342	.385	.429	.474	.520	.561	8
9	.117	.128	.141	.147	.160	.174	.188	.202	.210	.217	.232	.248	.264	.280	.289	.297	.314	.331	.375	.420	.466	.513	.557	9
10	.106	.117	.130	.136	.149	.163	.177	.192	.199	.207	.223	.239	.255	.272	.280	.289	.306	.323	.368	.414	.461	.509	.550	10
11	.096	.108	.120	.127	.140	.154	.168	.183	.191	.199	.215	.231	.248	.265	.273	.282	.300	.318	.363	.410	.458	.506	.546	11
12	.089	.100	.113	.119	.133	.147	.161	.177	.184	.192	.209	.225	.242	.260	.268	.277	.295	.313	.360	.407	.455	.504	.544	12
13	.082	.094	.106	.113	.127	.141	.156	.171	.179	.187	.204	.221	.238	.256	.265	.274	.292	.310	.357	.405	.454	.503	.543	13
14	.077	.089	.101	.108	.121	.136	.151	.167	.175	.183	.200	.217	.234	.252	.262	.271	.289	.308	.355	.404	.452	.502	.542	14
15	.072	.084	.096	.103	.117	.131	.147	.163	.171	.179	.196	.214	.232	.250	.259	.268	.287	.306	.354	.403	.452	.501	.541	15
16	.068	.080	.092	.099	.113	.128	.143	.160	.168	.176	.194	.211	.230	.248	.257	.267	.285	.305	.353	.402	.451	.501	.541	16
17	.064	.076	.089	.095	.110	.125	.140	.157	.165	.174	.191	.209	.228	.246	.256	.265	.284	.304	.352	.401	.451	.501	.541	17
18	.061	.073	.086	.092	.107	.122	.138	.155	.163	.172	.190	.208	.226	.245	.255	.264	.283	.303	.352	.401	.451	.500	.540	18
19	.058	.070	.083	.090	.104	.120	.136	.153	.161	.170	.188	.206	.225	.244	.254	.263	.283	.302	.351	.401	.450	.500	.539	19
20	.055	.067	.080	.087	.102	.117	.134	.151	.160	.169	.187	.205	.224	.243	.253	.263	.282	.302	.351	.400	.450	.500	.539	20
21	.053	.065	.078	.085	.100	.116	.132	.150	.158	.167	.186	.204	.223	.243	.252	.262	.282	.301	.351	.400	.450	.500	.538	21
22	.051	.063	.076	.083	.098	.114	.131	.148	.157	.166	.185	.204	.223	.242	.252	.262	.281	.301	.350	.400	.450	.500	.538	22
23	.049	.061	.074	.081	.096	.113	.130	.147	.156	.165	.184	.203	.222	.242	.251	.261	.281	.301	.350	.400	.450	.500	.537	23
24	.047	.059	.072	.080	.095	.111	.128	.146	.155	.165	.183	.203	.222	.241	.251	.261	.281	.301	.350	.400	.450	.500	.536	24
25	.045	.057	.071	.078	.094	.110	.127	.145	.155	.164	.183	.202	.222	.241	.251	.261	.281	.300	.350	.400	.450	.500	.535	25
26	.044	.056	.070	.077	.093	.109	.127	.145	.154	.163	.182	.202	.221	.241	.251	.261	.280	.300	.350	.400	.450	.500	.535	26
27	.042	.055	.068	.076	.091	.108	.126	.144	.154	.163	.182	.201	.221	.241	.251	.261	.280	.300	.350	.400	.450	.500	.534	27
28	.041	.053	.067	.075	.090	.107	.125	.144	.153	.163	.182	.201	.221	.241	.250	.260	.280	.300	.350	.400	.450	.500	.533	28
29	.040	.052	.066	.074	.090	.107	.125	.143	.153	.162	.181	.201	.221	.240	.250	.260	.280	.300	.350	.400	.450	.500	.532	29
30	.039	.051	.065	.073	.089	.106	.124	.143	.152	.162	.181	.201	.221	.240	.250	.260	.280	.300	.350	.400	.450	.500	.531	30
35	.034	.047	.061	.069	.086	.104	.122	.141	.151	.161	.181	.200	.220	.240	.250	.260	.280	.300	.350	.400	.450	.500	.535	35
40	.030	.043	.058	.066	.084	.102	.121	.141	.151	.160	.180	.200	.220	.240	.250	.260	.280	.300	.350	.400	.450	.500	.540	40
45	.028	.041	.056	.065	.083	.101	.121	.140	.150	.160	.180	.200	.220	.240	.250	.260	.280	.300	.350	.400	.450	.500	.545	45
50	.026	.039	.055	.063	.082	.101	.120	.140	.150	.160	.180	.200	.220	.240	.250	.260	.280	.300	.350	.400	.450	.500	.550	50

CURRICULUM VITAE

Name : Miss Srisuda Charoendee

Date of birth : June 22, 1971

Place of birth : Phayao, Thailand

Nationality : Thai

Religion : Buddhism

Marital status : Single

Education Qualification : Diploma in Nursing science,
Equivalent to Bachelor of Science in Nursing.

Place and Date of Obtained : Phayao Nursing College, Phayao, 1994.

Present employment : Registered Nurse, Phayao Hospital,
Ministry of Public Health, Thailand.

