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APPENDIX

Profiles of Selected Hospitals

Police General Hospital

Police General Hospital is a public hospital under Prime Ministry Office. The general information of this hospital is as follows.

Table A.1 : General information of Police General Hospital, 1996-1998

No.	Lists	1996	1997	1998
1	Number of Beds	714	707	727
2	Bed Occupancy Rate (percent)	68.68	70.22	58.46
3	Number of Outpatients per Year	481,609	499,162	423,678
	- Police	110,869	100,739	82,970
	- Police families	29,809	29,129	29,269
	- General People	340,931	369,294	311,439
4	Number of Inpatients per Year	24,772	24,102	22,122
	- Police	1,253	1,327	1,515
	- Police families	694	793	1,082
	- General People	22,825	21,982	19,525
5	Hospital length Stay (day)	9	9	9

Table A.2 : Personnels in Police General Hospital Classified by Occupation, 1997-1998

No.	Occupations	1996		1997		1998	
		Persons	Percent	Persons	Percent	Persons	Percent
1	Physicians	129	6.11	134	6.20	132	6.17
2	Dentists	15	0.71	15	0.69	15	0.70
3	Pharmacists	13	0.62	15	0.69	18	0.84
4	Nurses	721	34.14	767	35.48	801	37.43
5	Nurses assistants	179	8.48	162	7.49	165	7.71
6	Scientists	21	0.99	20	0.93	24	1.12
7	Nutritionists	8	0.38	8	0.37	14	0.65
8	Radiationists	15	0.71	13	0.60	13	0.61
9	Physical therapists	14	0.66	13	0.60	12	0.56
10	Public Health officer	1	0.05	1	0.05	1	0.05
11	Social welfare officers	13	0.62	14	0.65	14	0.65
12	Superintendent	1	0.05	1	0.05	1	0.05
13	Police inspectors or equal	4	0.19	4	0.19	4	0.19
14	Police sub-inspectors or equal	84	3.98	90	4.16	85	3.97
15	Others	894	42.33	905	41.86	841	39.30
	Total	2,112	100.00	2,162	100.00	2,140	100.00

Source : Department of Statistics, Police General Hospital

Table A.3 : Number of Items of Drugs in Police General Hospital, 1996-1998

No.	Lists	1997	1998
1	Number of Original Drugs	na	Na
2	Number of Local Made Drgus	na	Na
3	Number of Essential Drugs	na	654
4	Number of Non-essential Drugs	na	440
5	Total Item of drugs	1,009	1,094

Source : Department of Pharmacy, Police General Hospital

Table A.4 : Procurement Budget of Pharmacy Department in Police General Hospital Classified by Source of Income, 1996-1998

No.	Budget	1996		1997		1998	
		Baht	Percent	Baht	Percent	Baht	Percent
1	Annual Government Budget	-	0.00	-	0.00	-	0.00
2	Hospital Operating Budget	135,772,017	95.70	180,843,335	96.16	134,875,527	95.50
3	Budget for Poor Patients	6,106,091	4.30	7,215,711	3.84	6,356,715	4.50
	Total	141,878,108	100.00	188,059,046	100.00	141,232,242	100.00

Source : Department of Pharmacy, Police General Hospital

Sririraj Hospital

Sririraj Hospital is a university hospital under Ministry of Education. The general information of this hospital is as follows.

Table A.5 : General information of Sririraj Hospital, 1996-1998

No.	Lists	1996	1997	1998
1	Number of Beds	2,267	2,302	2,143
2	Bed Occupancy Rate (percent)	68.46	71.17	79.10
3	Number of Outpatients per Year	1,289,283	1,353,840	1,084,506
4	Number of Inpatients per Year	60,892	59,044	57,867
5	Hospital length Stay (day)	9.14	10.12	10.68

Source : Department of Statistics, Sririraj Hospital

Table A.6 : Personnels in Sririraj Hospital Classified by Occupation, 1997-1998

No.	Occupation	1997		1998	
		Persons	Percent	Persons	Percent
1	Physicians	720	12.63	1244	7.03
2	Dentists	11	0.11	11	0.11
3	Pharmacists	39	0.45	44	0.38
4	Nurses	1,844	19.90	1,961	18.01
5	Nurse Assistants	1,974	14.72	1,450	19.28
6	Others	5,649	47.80	5,143	54.63
	Total	10,237	100.00	9,853	100.00

Source : Department of Statistics, Sririraj Hospital

Table A.7 : Number of Items of Drugs in Siriraj Hospital, 1996-1998

No	Lists	1997	1998
1	Number of Original Drugs	na	na
2	Number of Local Made Drugs	na	na
3	Number of Essential Drugs	na	1,231
4	Number of Non-essential Drugs	na	770
5	Total Item of drugs	1,972	2,001

Source : Department of Pharmacy, Siriraj Hospital

Table A.8 : Procurement Budget of Pharmacy Department in Siriraj Hospital Classified by Source of Income, 1996-1998

No.	Budget	1996		1997		1998	
		Baht	Percent	Baht	Percent	Baht	Percent
1	Annual Government Budget	128,335,708.03	18.32	150,539,967.40	18.00	103,745,265.20	11.36
2	Hospital Operating Budget	535,646,889.61	76.45	640,976,389.25	76.65	762,188,569.29	83.45
3	Budget for Poor Patients	28,697,238.08	4.10	37,949,932.95	4.54	47,363,314.80	5.19
4	Budget for AIDS Patients	7,999,959.82	1.14	6,825,739.00	0.82	2,487,700.00	0.27
	Total	700,679,795.54	100.00	836,292,028.60	100.00	913,297,149.29	100.00

Source : Department of Pharmacy, Siriraj Hospital

Ramathibodi Hospital

Ramathibodi Hospital is a university hospital under ministry of education. The general information of this hospital is as follows.

Table A.9 : General information of Ramathibodi Hospital, 1996-1998

No.	Lists	1996	1997	1998
1	Number of Beds	893	938	933
2	Bed Occupancy Rate (percent)	82.70	80.60	80.30
3	Number of Outpatients per Year	979,362	1,081,357	1,094,352
4	Number of Outpatients per Day	3,915	4,312	4,248
5	Number of Inpatients per Year	26,360	28,478	30,041
6	Number of Inpatients per Official Day	82	87	82
7	Number of Inpatients per Official Holiday	52	60	na
8	Hospital length Stay (day)	8	7.90	7

Source : Department of Pharmacy, Ramathibodi Hospital

Table A.10 : Personnel in Ramathibodi Hospital Classified by Type of Position, 1996-1998

No.	Positions	1996		1997		1998	
		Persons	Percent	Persons	Percent	Persons	Percent
1	Government Official	2,659	49.40	2,735	49.94	2,778	49.10
2	Permanent Employee	1,803	33.50	2072	37.83	2235	39.10
3	Temporary Employee	835	15.50	566	10.33	572	10.10
4	University Official	86	1.60	104	1.90	96	1.70
	Total	5,383	100.00	5,477	100.00	5,681	100.00

Source : Department of Statistics , Ramathibodi Hospital

Table A.11 : Personnel in Ramathibodi Hospital Classified by Occupation, 1997-1998

No.	Lists	1997		1998	
		Persons	Percent	Persons	Percent
1	Physicians	514	9.25	539	9.52
2	Dentists	9	0.16	11	0.19
3	Pharmacists	22	0.40	25	0.44
4	Nurses	881	15.85	1,100	19.42
5	Nurse Assistants	987	17.76	1,010	17.84
6	Scientists	51	0.92	53	0.94
7	Engineers	5	0.09	4	0.07
8	Other University Lecturers	55	0.99	60	1.06
9	Administration Officers	345	6.21	341	6.02
10	Others	2,688	48.37	2,520	44.50
	Total	5,557	100.00	5,663	100.00

Source : Department of Statistics , Ramathibodi Hospital

Table A.12 : Number of Items of Drugs in Ramathibodi Hospital, 1996-1998

No	List	1996	1997	1998
1	Number of Original Drugs	1,220	1,304	1,329
2	Number of Local Made Drgus	534	491	517
3	Number of Essential Drugs	744	746	745
4	Number of Non-essential Drugs	1,010	1,019	1,101
5	Total Item of drugs	1,754	1,795	1,846

Source : Department of Statistics , Ramathibodi Hospital

Table A.13 : Procurement Budget of Pharmacy Department in Ramathibodi Hospital Classified by Source of Income, 1996-1998

No.	Budget	1996		1997		1998	
		Baht	Percent	Baht	Percent	Baht	Percent
1	Annual Government Budget	84,976,039	17.01	78,418,755	11.85	53,504,673	8.66
2	Hospital Operating Budget	414,729,861	82.99	583,271,917	88.15	552,047,732	89.39
3	Budget for Poor Patients	-	-	-	-	12,026,839	1.95
	Total	499,705,900	100.00	661,690,672	100.00	617,579,244	100.00

Source : Department of Statistics , Ramathibodi Hospital

The regression results

1. Original drug and local made drug using model as follows;

$$DLNP_t = \beta_0 + \beta_1 (DLNFX_t) + \beta_2 (DLNFX_t * ED_t) + \beta_3 (ED_t) + \beta_4 (DLNQ_t) + \beta_5 (VAT_t) + \beta_6 (MP_t) + \beta_7 (CSMB_t) + \beta_8 (DT_t) + \beta_9 (H1_t) + \beta_{10} (H2_t) + \mu_t \text{-----}(2)$$

Table A.14 : Estimates of Coefficient Variables of Percentage Change in Original and Local Made Drug Prices in Equation (2)

Variable	ORIGINAL DRUG			LOCAL MADE DRUG		
	Coefficient	t-Statistic	Prob.	Coefficient	t-Statistic	Prob.
C	0.01312	2.11071	0.0351	0.07868	3.29798	0.0010
DLNFX	0.10324	2.29348	0.0221	0.19811	1.15250	0.2494
DLNFX*ED	-0.04867	-1.27145	0.2039	0.06226	0.45952	0.6460
ED	-0.01287	-1.85568	0.0638	0.00415	0.15882	0.8739
DLNQ	-0.01978	-3.78432	0.0002	-0.04593	-3.35452	0.0008
VAT	0.00745	1.02081	0.3076	-0.00181	-0.06698	0.9466
MP	0.01335	1.94586	0.0520	0.03651	1.75049	0.0804
CSMB	0.01301	2.02219	0.0435	0.01084	0.60650	0.5443
DT	-0.00023	-0.59991	0.5487	-0.00343	-3.02330	0.0026
H1	-0.00414	-0.75517	0.4503	-0.11470	-8.18561	0.0000
H2	-0.01644	-4.08326	0.0000	-0.10640	-8.60568	0.0000
R-squared	0.17721			0.17202		
Adjusted R-squared	0.16796			0.16212		
F-statistic	19.14704			17.36874		
Prob(F-statistic)	0.0000			0.0000		
Samples	900			847		

2. Essential drugs and non-essential drugs using reduced model as follows;

$$DLNP_t = \beta_0 + \beta_1(DT_t) + \beta_2(DLNFX_t) + \beta_3(DLNFX_t*ORI_t) + \beta_4(DLNFX_t*DLNQ_t) + \beta_5(ORI_t) + \beta_6(DLNQ_t) + \beta_7(VAT_t) + \beta_8(MP_t) + \beta_9(CSMB_t) + \beta_{10}(H1_t) + \beta_{11}(H2_t) \quad (3)$$

Table A.15 : Estimates of Coefficient Variables of Percentage Change in Essential and Non-Essential Drug Prices in Equation (3)

Variable	ESSENTIAL DRUG			NON-ESSENTIAL DRUG		
	Coefficient	t-Statistic	Prob.	Coefficient	t-Statistic	Prob.
C	0.05790	4.05030	0.0001	0.00797	0.48389	0.6286
DLNFX	0.31362	2.80920	0.0051	0.06949	0.73347	0.4635
DLNFX*ORI	-0.08523	-0.93695	0.3490	0.05867	0.77601	0.4380
ORI	-0.00841	-0.49504	0.6207	0.01885	1.31434	0.1892
DLNQ	-0.06532	-6.08774	0.0000	0.00121	1.03470	0.3012
VAT	0.01515	0.82656	0.4087	-0.01495	-0.93467	0.3503
MP	0.01837	1.18410	0.2366	0.02269	1.76269	0.0784
CSMB	0.02298	1.62227	0.1050	-0.00445	-0.35932	0.7195
DT	-0.00410	-4.50720	0.0000	0.00048	0.49179	0.6230
H1	-0.07506	-6.56102	0.0000	-0.04746	-5.23218	0.0000
H2	-0.06794	-7.23869	0.0000	-0.04837	-6.69451	0.0000
R-squared	0.14676			0.15420		
Adjusted R-squared	0.13876			0.14137		
F-statistic	18.33584			12.01448		
Prob(F-statistic)	0.0000			0.0000		
Samples	1077			670		

Vitae

Miss Tharnthip Kongkatong was born in Bangkok, 0 June 4th, 1975. She graduated from Chulalongkorn University, Bachelor of Sciences in Pharmaceutical Sciences, in 1997. She has furthered her study in Master of Science in Health Economics, Faculty of Economics, Chulalongkorn University in 1998.

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