

APPENDICES

APPENDIX 1

Prescribing Indicator Form

Location: _____

Investigator: _____ Date: _____

seq. #	type (R/P)*	date of Rx	age (year)	# drugs	# generics	antib. (0/1)♦	Injec. (0/1) ♦	# on EDL	Diagnosis (optional)
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
Total									
Average									
Percentage					% of total drugs	% of total cases	% of total cases	% of total drugs	

* Retrospective / Prospective

♦ 0 = No 1 = Yes

Source: World Health Organization. (1993). How to investigate drug use in health facilities. Geneva: World Health Organization.

APPENDIX 2

Detailed Prescribing Encounter Form

Location: _____

Investigator: _____ Date: _____

ID #	date	name	age	sex	prescriber
Health problems	Health problem description		Code		
	1				
	2				
	3				
Drugs	Name and Strength		Code		Quality
	1				
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
10					

ID #	date	name	age	sex	prescriber
Health problems	Health problem description		Code		
	1				
	2				
	3				
Drugs	Name and Strength		Code		Quality
	1				
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
10					

Source: World Health Organization. (1993). How to investigate drug use in health facilities. Geneva: World Health Organization.

APPENDIX 3

Patient Care Form

Location: _____

Investigator: _____ Date: _____

seq. #	Patient identifier (if needed)	Consulting time (mins)	Dispensing time (secs)	# drugs prescribed	# drug dispensed	# adequately labeled	Knows dosage (0/1)*
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
Count							
Total							
Average							
Percentage					% of prescribed	% of dispensed	% of cases asked

* 0 = No 1 = Yes

Source: World Health Organization. (1993). How to investigate drug use in health facilities. Geneva: World Health Organization

APPENDIX 5

Facility Indicator Reporting Form

Location: _____

Investigator: _____ Date: _____

		This facility	National standard
Number of cases	Prescribing		
	Patient care		
Average number of drugs prescribed			
Percentage of drugs prescribed by generic names		%	%
Percentage of encounters with an antibiotic prescribed		%	%
Percentage of encounters with an injection prescribed		%	%
Percentage of drugs prescribed on essential drug list		%	%
Average consultation time		mins	mins
Average dispensing time		secs	secs
Percentage of drugs actually dispensed		%	%
Percentage of drugs adequately labeled		%	%
Percent correct patient knowledge of dosage		%	%
Availability of essential drugs list or formulary		Yes / No	%
Percentage availability of key indicator drugs		%	%

COMMENTS:**SIGNATURES:**

Source: World Health Organization. (1993). How to investigate drug use in health facilities. Geneva: World Health Organization.

APPENDIX 7

**Sample Size and Critical Number of *Failures* for
Lot quality assurance sampling (LQAS)**

MAXIMUM NUMBER OF ENCOUNTERS TO EXAMINE								
Average level of adequate performance	Level of inadequate performance							
	20 %	30 %	40 %	50 %	60 %	70 %	80 %	90 %
10 %	83	26	13	8	5	3	2	1
20 %		119	33	15	9	5	3	2
30 %			143	37	16	9	5	3
40 %				153	38	16	8	4
50 %					151	35	13	6
60 %						137	29	10
70 %							109	20
80 %								69

NUMBER OF <i>FAILURES</i> FOR INADEQUATE PERFORMAMNCE								
Average level of adequate performance	Level of inadequate performance							
	20 %	30 %	40 %	50 %	60 %	70 %	80 %	90 %
10 %	10	3	2	1	1	0	0	0
20 %		27	8	4	2	1	1	0
30 %			47	13	6	3	2	1
40 %				66	17	8	4	2
50 %					80	19	8	4
60 %						87	19	7
70 %							80	15
80 %								57

Source: World Health Organization (1993). How to investigate drug use in health facilities. Geneva: World Health Organization.

APPENDIX 8

Examples of Earlier Studies

Country	YEM (1)	UGA (2)	SUD (3)	MAL (4)	IND (5)	BAN (6)	ZIM (7)	TAN (8)	NIG (9)	NEP (10)	ECU (11)
Date	3/88	9/90	5/91	6/91	7/91	8/91	7/91	2/92	2/92	5/92	10/92
# of facilities	19	42	37	72	20	20	56	20	20	20	19
# of drugs per prescription	1.5	1.9	1.4	1.8	3.3	1.4	1.3	2.2	3.8	2.1	1.3
% antibiotics	46	56	63	34	43	31	29	39	48	43	27
% injections	25	48	36	19	17	0.2	11	29	37	5	17
% generics			63		59		94	82	58	44	37
% EDL drugs								88		86	
Consultation time (min)				2.3	3			3	6.3	3.5	
Dispensing time (sec)								77.8	12.5	86.1	
% knowledge of dosage				27	82	63		75	81	56	
% drugs dispensed									70	83	
% drugs in stock				67				72	62	90	38
% impartial information										40	

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APPENDIX 9

**1999 National List of Essential Drug
for hospitals and health facilities**

2-PAM	beclomethasone dipropionate
5-FC	bentonite magma
	benzalkonium chloride
	benzathine benzylpenicillin
acetazolamide	benzocaine
acetylcysteine	benzoic acid+salicylic acid
activated charcoal	benzyl benzoate
air, compressed	benzylpenicillin
albendazole	betamethasone valerate
alcohol, ethyl	bisacodyl
allopurinol	blood, whole
aluminium acetate	boric acid
aluminium hydroxide	buchu mixture, compound
aluminium hydroxide + magnesium hydroxide	budesonide
aluminium subacetate	bupivacaine hydrochloride
aminophylline	buprenorphine hydrochloride
amitriptyline hydrochloride	
ammonia	caffeine 100 mg + ergotamine
ammonia and squill mixture	tartrate 1 mg
ammonium carbinate and senega mixture	calamine lotion
amoxicillin	calcium carbonate
amphotericin B	calcium gluconate
ampicilline sodium	calcium hydroxide
anthralin	calcium lactate
anti-D immunoglobulin (human)	camphor + menthol + phenol
anti-inflammatory agents + local anesthetic + astringent	camphorated parachlorophenol
antirabies hyperimmune serum	camphorated phenol
antivenom sera	captopril
aqueous Iodine solution	carbidopa 25 mg + levodopa 100 mg
artesunate	cardamom mixture, compound
aspirin	carminative
astringent + local anesthetic + antiinflammatory agents	castor oil
atenolol	cefalexin
atracurium besylate	cefazolin sodium
atropine sulfate	charcoal, activated
	chloral hydrate
	chloramphenicol
barium sulfate	chlorhexidine 0.5% in alcohol 70%
BCG (bacillus calmette-gue/rin)	chlorhexidine gluconate
	chloroquine phosphate

chloroxylenol	epinephrine + lidocaine
chlorpheniramine maleate	hydrochloride
chlorpromazine	epinephrine + mepivacaine
chlorpropamide	ergotarmine tartrate
cimetidine	ergotarmine tartrate 1 mg + caffeine
cinnarizine	100 mg
clofazimine	erythromycin
clotrimazole	ethambutol hydrochloride
clove oil	ethinylestradiol + desogestrel
cloxacillin sodium	ethinylestradiol + gestodene
coal tar	ethyl alcohol
codeine phosphate	
compound cardamon mixture	
compressed air	fentanyl citrate
cotrimoxazole	ferrous fumarate
cresol 50 %	ferrous sulfate
	flucytosine
	fluocinolone
depsone	5-fluorocytosine (5-FC)
desogestrel + ethinylestradiol	fluphenazine
dexamethasone	folic acid
dextromethorphan hydrobomide	formaldehyde
dialysis, intermittent peritoneal	fresh dried plasma
dialysis, intraperitoneal	fresh frozen plasma
diazepam	Fuller's Earth
dicoxacillin sodium	furosemide
dicyclomine hydrochloride	
diethylcarbamazine citrate	
digoxin	gelatin, polymerisate of
dihydralazine mesylate	gentamicin sulfate
diloxanide furoate	gentian violet
diltiazem	gestodene + ethinylestradiol
dimenhydrinate	glibenclamide
diphenhydramine hydrochloride	glipizide
diphtheria antitoxin	glucose
diphtheria-tetanus vaccine	glucose + sodium chloride
diphtheria-tetanus-pertussis vaccine	glutaraldehyde
dithranol	glycerin borax
dopamine	glycerol
doxycycline hydrochloride	glyceryl guaiacolate
DTP	griseofulvin
enalapril	haloperidol
ephedrine	halothane
ephedrine hydrochloride	heparin sodium
epinephrine	hepatitis B vaccine
epinephrine bitartrate	hydralazine hydrochloride

hydrochlorothiazide
 hydrocortisone
 hydrocortisone acetate
 hydrogen peroxide
 hydroxyethyl starch
 hyoscine-n-butylbromide

ibuprofen
 immunoglobulin, anti-D, human
 indomethacin
 insulin
 intermittent peritoneal dialysis
 intraperitoneal dialysis
 iodine in alcohol
 iodine paint, compound
 ipecacuanha
 isoniazid
 isoproterenol
 isosorbide dinitrate

Japanese encephalitis vaccine

ketamine hydrochloride
 ketoconazole
 ketotifen fumarate

lactic acid + salicylic acid
 levodopa 100 mg + carbidopa 25 mg
 lidocaine
 lidocaine hydrochloride
 lidocaine hydrochloride + epinephrine
 lidocaine hydrochloride + norepinephrine
 liquid paraffin
 local anesthetic + astringent +
 antiinflammatory agents
 lysol solution

magnesium hydroxide
 magnesium hydroxide + aluminium hydroxide
 magnesium sulfate
 Mandl's paint
 Mannitol
 measles vaccine

measles-mumps-rubella vaccine
 mebendazole
 medroxyprogesterone acetate
 mefenamic acid
 menthol + phenol + camphor
 mepivacaine
 mepivacaine + epinephrine
 metaraminol tartrate
 metformin
 methadine hydrochloride
 methimazole
 methyl dopa
 methylergometrine maleate
 methylsalicylate
 metoclopramide hydrochloride
 mtrnidazole
 miconazole nitrate
 milk of magnesia
 mineral oil
 MMR
 morphine sulfate
 multivitamins

N-acetylcysteine
 nalbuphine hydrochloride
 naloxone hydrochloride
 naproxen
 neomycin
 neostigmine methylsulfate
 niclosamide
 nicotinic acid
 nifedipine
 nitrofurantoin
 nitrofurazone
 nitrous oxide
 norepinephrine + lidocaine
 hydrochloride
 norethisterone
 norfloxacin
 nystatin

opium and glycyrrhiza mixture
 compound
 OPV
 oral rehydration salts
 Oxygen

oxypolygelatin
oxytocin

packed red cell
pancuronium bromide
paracetamol
parachlorophenol, camphorated
penicillin G
penicillin G benzathine
penicillin G procaine
penicillin V potassium
perphenazine
pethidine hydrochloride
phenobarbital
phenol, camphorated
phenol + menthol + camphor
phenoxymethylpenicillin potassium
phenytoin sodium
phytomenadione
pilocarpine hydrochloride
pilocarpine nitrate
plasma, fresh dried
plasma, fresh frozen
platelet concentrate, random donor
podophyllin
poliomyelitis vaccine (live attenuated)
polygeline
polymerisate of gelatin
potassium chloride
potassium citrate
potassium iodide, saturated solution of
potassium permanganate
povidine iodine
pralidoxime chloride (2-PAM)
praziquantel
prednisolone
primaquine diposphate
probenecid
promethazine hydrochloride
propranolol hydrochloride
propylthiouracil
protamine sulfate
pseudoephedrine hydrochloride
pyrantel pamoate
pyrazinamide
pyridostigmine bromide
perimethamide

quinine dihydrochloride
quinine sulfate

rabies vaccine
red cell, packed
reserpine
rifampicin
Ringer's lactate
roxithromycin
rubella vaccine

salbutamol sulfate
salicylic acid
salicylic acid + benzoic acid
salicylic acid + lactic acid
saturated solution of potassium iodide
senega mixture and ammonium carbonate
senna
silver nitrate
silver sulfadiazine
simethicone
sodium bicarbonate
sodium chloride
sodium chloride + glucose
sodium citrate + potassium citrate
sodium fluoride
sodium hypochlorite
sodium nitroprusside
sodium phosphates enema
sodium thiosulfate
sodium valproate
special mouthwash
squill and ammonia mixture
SSKI
stomachic mixture
streptomycin sulfate
sulfacetamide sodium
sulfadiazine
sulfamethoxazole + trimethoprim
suxamethonium chloride

talbot's solution
terbutaline sulfate
tetanus antitoxin
tetanus vaccine

tetracycline hydrochloride
theophylline
thiabendazole
thimerosal
thiopental sodium
thyroxine sodium (L-form)
tincture of iodine
triamcinolone acetonide
trichloroacetic acid
trifluoperazine
trihexyphenidyl hydrochloride
trimetoprim + sulfamethoxazole

urea

vecurinium bromide
verapamil
vitamin A
vitamin B complex
vitamin B1
vitamin B2
vitamin B6
vitamin B12
vitamin K1

water for injection
whitfield's ointment
whole blood

zinc acetate + zinc oxide
zinc chloride
zinc oxide
zinc oxide + zinc acetate
zinc sulfate

APPENDIX 10

**1999 List of Essential Drug
for health centers, Kanchanaburi province**

adrenaline	hydrochlorothiazide
alcohol, ethyl	hydrogen peroxide
aluminum hydroxide + magnesium hydroxide	hyoscine-n-butylbromide
ammonia	
amoxicillin	Ibuprofen
aspirin	
atropine sulfate	
	lidocaine
	loperamide
bisacodyl	lysol solution
carminative	mist scill ammon
chlorpheniramine maleate	mebendazole
chloroquine phosphate	medroxyprogesterone acetate
cotrimoxazole	methylergometrine maleate
	methylsalicylate
	metoclopramide hydrochloride
D-5-N/2	miconazole nitrate
D-5-S	multivitamins
D-5-W	mydoclam
dextromethorphan hydrobromide	
diazepam	
dioxacillin sodium	NSS 0.9%
dimenhydrinate	nitrofurazone
domperidone	
drotraverine	
	oral rehydration salts
erythromycin	
	paracetamol
	penicillin V potassium
ferrous sulfate	phenobarbital
furazone	primaquine
	poloph
	povidine iodine
gentian violet	
glucose	
glutaraldehyde	quinine sulfate
glyceryl guaiacolate	
	roxithromycin

salbutamol sulfate
silver sulfadiazine
sodamint
sodium bicarbonate

triamcinolone acetonide

vitamin B complex
vitamin B1-6-12
vitamin C

whifield's ointment

APPENDIX 11

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