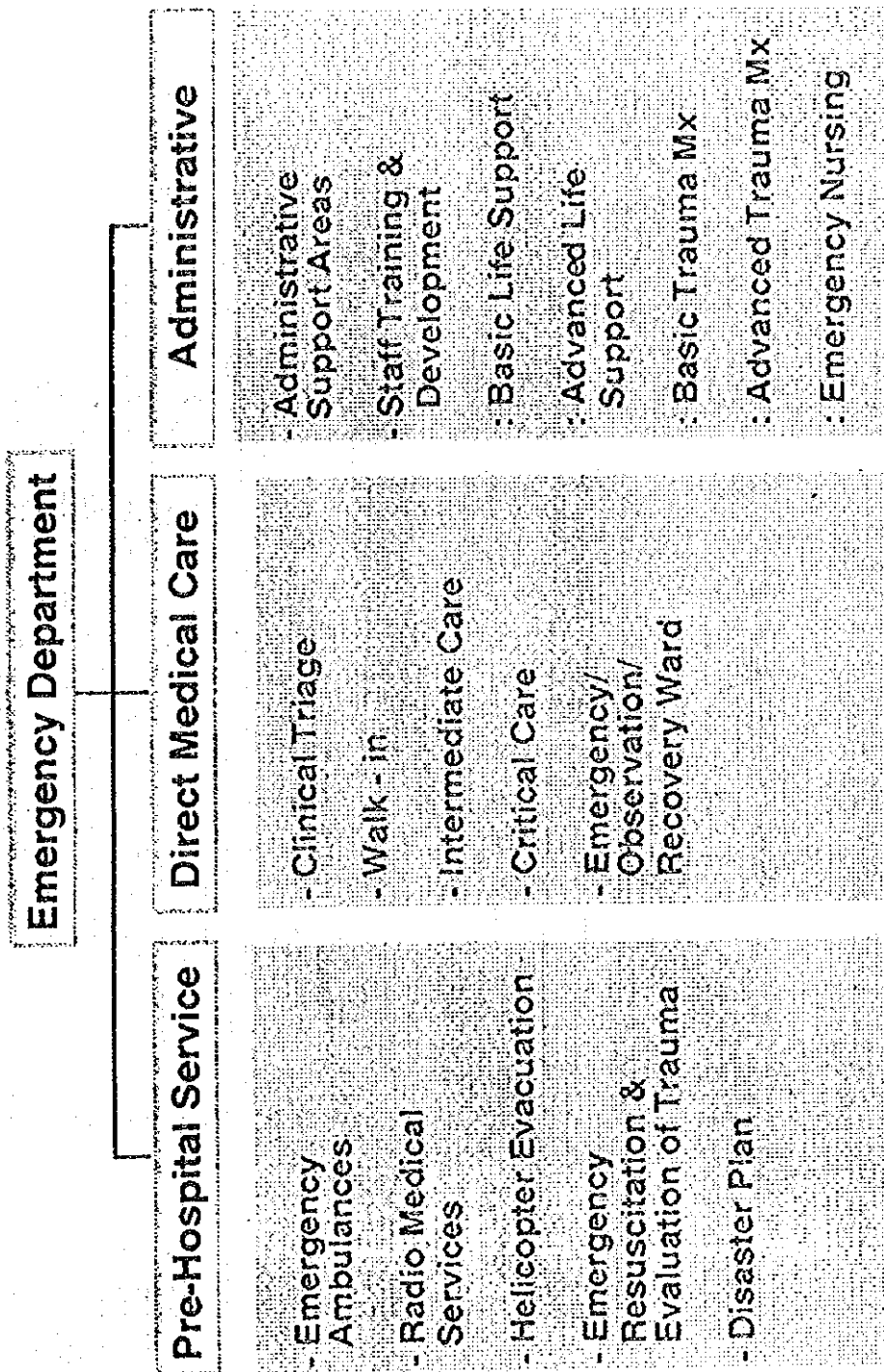
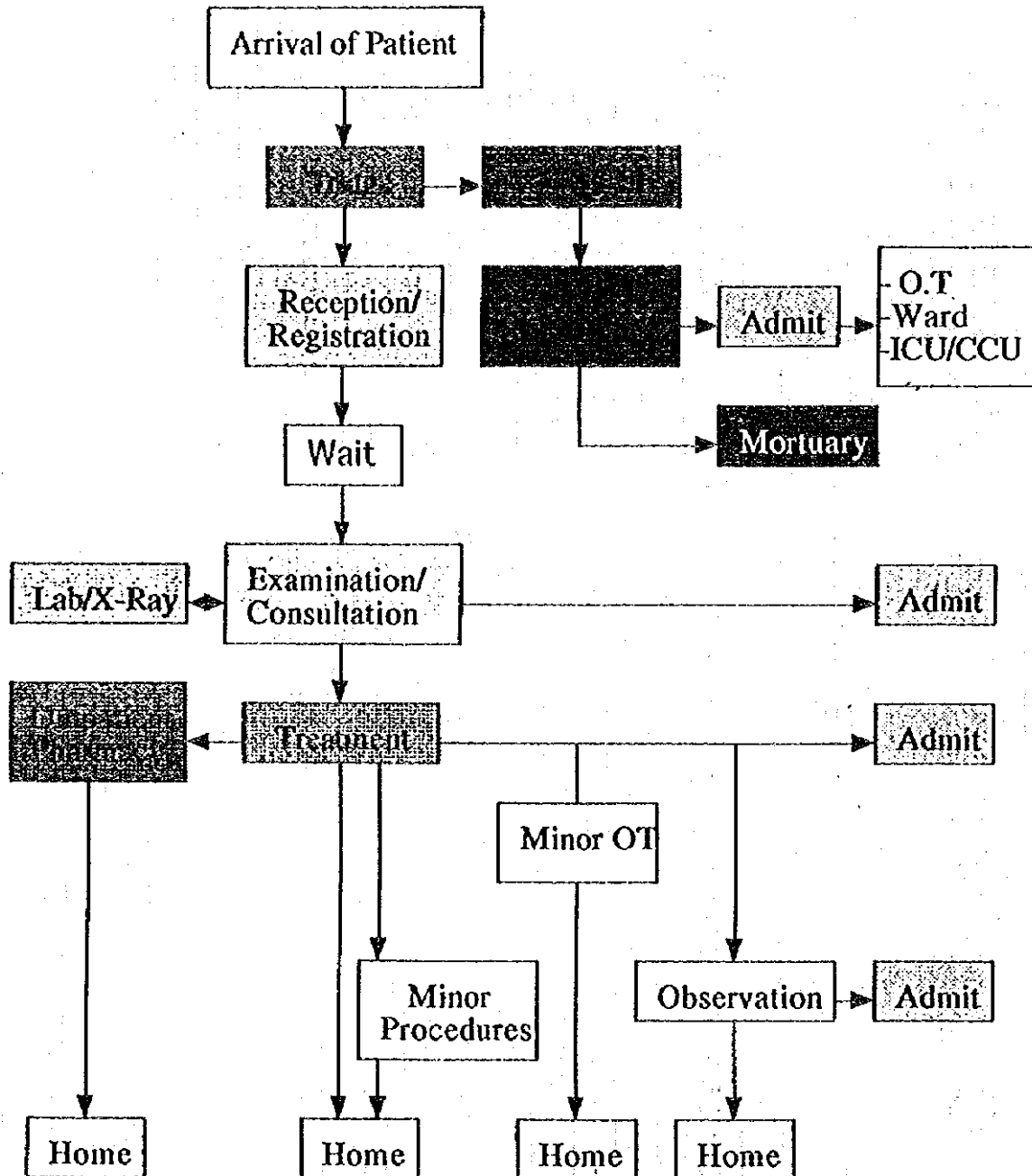


Emergency Department

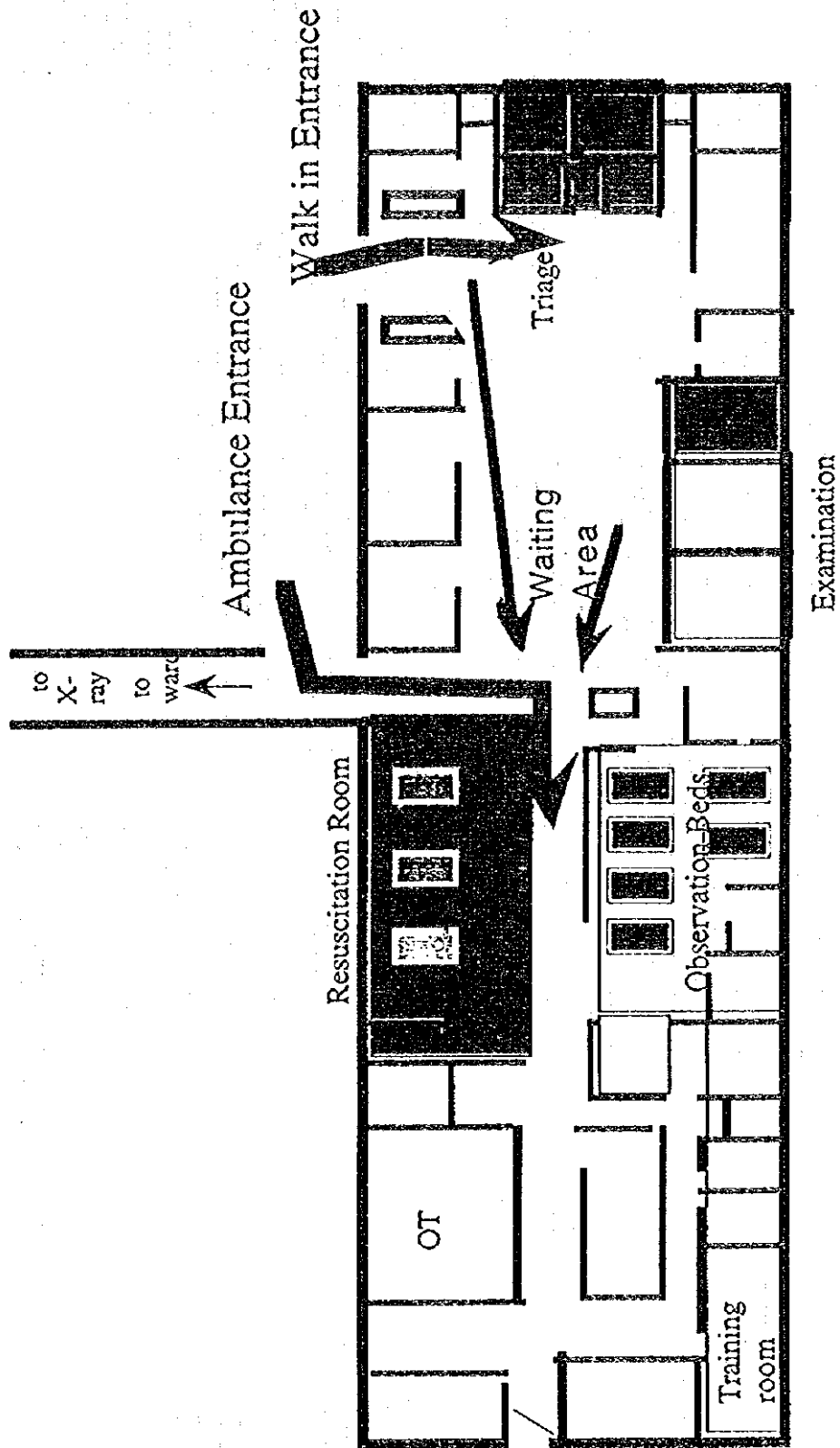
Organisation Chart (Functional)



PATIENT FLOW EMERGENCY DEPARTMENT



Layout of new E/D Sarawak General Hospital



New forms and check list developed

	FORM
1	Patient Record
2	Pre-Hospital Care Report
3	Ambulance Call Information
4	Resuscitation Flow Chart
5	Observation Room Note
6	MA Ambulance Check List
7	Driver Ambulance Check List
8	Ambulance Service Schedule
9	ME Weekly Plan
10	ME History Record of Maintenance Service
11	ME Master File of Equipment
12	ME Defibrillator Performance Test Record
13	ME Defibrillator Check Sheet
14	ME Medical Machine Check List
15	ME Transfusion Pump Inspection Table
16	ME Ventilator Maintenance Record
17	ME Repair Report

EMERGENCY DEPARTMENT
SARAWAK GENERAL HOSPITAL:

PATIENT RECORD FORM:

DATE:		TIME:		HRS	NRIC:	A&E REC. NO:						
TYPE:	MVA	POLICE	BID	SOC SO	TRIAGE: 1) NON-URGENT 2) SEMI-URGENT 3) URGENT & LIFE-THREATENING							
PATIENT'S NAME:					SEX: MALE/FEMALE		AGE:					
ADDRESS:						TEL:						
RACE:					CHIEF COMPLAINTS:							
OCCUPATION		MA	ME	IB	BI	CH	OI	F				
ALLERGIES:												
REFERRED FROM		1	2	3	4	5	6					
TRANSPORTATION		1	2	3	4	5	6	7	8			
ASSOCIATED MEDICAL PROBLEMS					HPT	DM	IID	ASTHMA				
HISTORY:					INVESTIGATIONS:							
					1 - X-RAY		2 - CTSCAN					
					3 - USS		4 - ECG					
					5 - ABG		6 - O ₂ SAT					
					7 - BLOOD & URINE TEST							
					8 - SPINAL TAP							
					9 - URINARY CATHETER							
EXAMINATIONS:					VITAL SIGNS							
					RESP :		/M					
					PULSE :		/M					
					TEMP :		°C					
					O ₂ SAT :		%					
					CCS :							
B/P :		mmHg										
MANAGEMENTS:					INTERVENTION							
					AIRWAY 11. NEBULIZER 12 OXYGEN 13. INTUBATION 14. CHEST TUBE							
					HEART 21. CARDIO VERSION 22. PACING 33 CPR							
					CIRCULATION 31 IV-LINE 32. CV-LINE 33 A-LINE 34. BLOOD TRANS FUSION							
					MINOR SURGERY 41. TOILET & SUTURING 42. DRAINAGE ABSCESS							
					EXTREMITY 51. POP CAST 52. CNR 53. SPLINTING 54. TRACTION							
					THERAPY							
					MEDS 1-1. ADRENALINE 1-2. DOPAMINE 1-3. DOBUTAMINE							
					MEDS 2-1. LIGNOCAINE 2-2. VERAPAMIL							
					3. HYDRALAZINE 4. FRUSEMIDE 5. STREPTOKINASE							
					6 DIAZEPAM 7. IV ANTIBIOTICS							
					OTHERS							
DIAGNOSIS			PATIENT'S OUTCOME			CONSULTATION TIME						
			TIME OF OUTCOME			ATTENDING MA:						
			01. DISCHARGE TO HOME			ATTENDING SPECIALIST NO:						
			02. ADMIT TO WARD/ICU. CCU/OT/SHORTUARY									
			03. FOLLOW-UP AT POLYCLINIC. SPECIALIST CLINIC/CP									

OCCUPATION 1. GOVERNMENT SERVANT 2. PRIVATE 3. SELF EMPLOYED 4. OTHERS
 REFERRED FROM 1. POLICLINIC 2. SICHC 3. GOV HOSP. 4. PK or KD 5. PRV DR 6. OTHERS []
 TRANSPORTATION 1. AMBULANCE 2. OWN VEHICLE 3. BUS 4. TAXI 5. POLICE 6. EMT 7. NON EMT 8. OTHERS []

SARAWAK GENERAL HOSPITAL PREHOSPITAL CARE REPORT

DATE:		AMB. NO.		RUN. NO.			
TYPE OF RUN:		Referral - <input type="checkbox"/> Yes <input type="checkbox"/> No		T I M E	CALL RECD		
<input type="checkbox"/> Emergency <input type="checkbox"/> Non-Emergency <input type="checkbox"/> Dry Run					DISPATCHED		
INCIDENT LOCATION:		CODE:			AT SCENE		
					FROM SCENE		
PATIENT NAME:				M I L E A G E	END		
AGE:	SEX:	I.C. NO:			BEGIN		
RACE: MA / ME / IB / BI / OI / CH / OT					TOTAL		
CHIEF COMPLAINT & HISTORY / MECHANISM OF INJURY:							
TYPE OF ILLNESS / INJURY:							
<input type="checkbox"/> Respiratory <input type="checkbox"/> Poisoning <input type="checkbox"/> Multiple Trauma <input type="checkbox"/> Cardiac <input type="checkbox"/> Neonate <input type="checkbox"/> Head / Spinal Trauma <input type="checkbox"/> CVA / Hypertension <input type="checkbox"/> Behavioral <input type="checkbox"/> Chest / Abdominal / Pelvic Trauma <input type="checkbox"/> Abdominal Distress <input type="checkbox"/> Other Illness <input type="checkbox"/> Extremity Trauma <input type="checkbox"/> Diabetic <input type="checkbox"/> Burns <input type="checkbox"/> Loss of Consciousness <input type="checkbox"/> Obstetrical <input type="checkbox"/> Other Trauma						<input type="checkbox"/> RTA <input type="checkbox"/> Industrial Accident	
TIME	RESP.	PULSE	B.P.	L.O.C.	SKIN		
PATIENT ASSESSMENT:							
TREATMENT GIVEN:							
<input type="checkbox"/> Airway Cleared <input type="checkbox"/> Oral / Nasal Airway <input type="checkbox"/> Endotracheal Tube <input type="checkbox"/> Oxygen Administered: _____ #/min. <input type="checkbox"/> Suction Used		<input type="checkbox"/> Artificial Ventilation: _____ <input type="checkbox"/> CPR Started: Time _____ <input type="checkbox"/> ECG Monitored <input type="checkbox"/> IV Fluid: _____ <input type="checkbox"/> Bleeding Controlled <input type="checkbox"/> Spinal Immobilization		<input type="checkbox"/> Limb Immobilization <input type="checkbox"/> (Heat) or (Cold) Applied <input type="checkbox"/> Baby Delivered: Time _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Transport Only			
C R E W	IN CHARGE:			OTHERS:			
	DRIVER:						
	TYPE OF TEAM: 0 0 0 0 (<input type="checkbox"/> EMT 0 0 (<input type="checkbox"/>)						

**EMERGENCY DEPARTMENT.
SARAWAK GENERAL HOSPITAL**

AMBULANCE CALL INFORMATION.

DATE:	TIME:	RUN NO:
CALLER'S NAME:	CALLER'S TEL NO:	
CHIEF COMPLAINT:		
PATIENT'S ADDRESS:		
RECEIVED BY:	TEL CODE: EXT 5999/5995. 230689. 999 (POLICE/PUBLIC) OTHER MODES.	

DATE / /		NAME			AGE	SEX	I/C NO.
BED NO.	CHIEF COMPLAINT						
TIME	BP	PR	RR	BT	NURSING OBSERVATIONS / TREATMENT		
DISCHARGE/ TRANSFER	1. DISCHARGED 2. ADMITTED () 3. DEAD				NAME OF ATTENDING DOCTOR: MA:		NAME OF ATTENDING NURSE:

DATE / /		NAME			AGE	SEX	I/C NO.
BED NO.	CHIEF COMPLAINT						
TIME	BP	PR	RR	BT	NURSING OBSERVATIONS / TREATMENT		
DISCHARGE/ TRANSFER	1. DISCHARGED 2. ADMITTED () 3. DEAD				NAME OF ATTENDING DOCTOR: MA:		NAME OF ATTENDING NURSE:

NURSING NOTES (A&E DEPT, SARAWAK GENERAL HOSPITAL.)

AMBULANCE QSG 1671 CHECKLIST

	am	pm	night
1. IV CANULA (VARIOUS SIZES)	0	0	0
2. DISPOSABLE GLOVES/ 1 BOX	0	0	0
3. O2 FACE MASK X1	0	0	0
4. O2 NASAL CANULA X 1	0	0	0
5. O2 VENTI MASK X 1	0	0	0
6. PLASTER/ADHESIVE X 1	0	0	0
7. FORCEPS-SPONGE HOLDER X 1	0	0	0
8. FORCEPS-MIGGIL X 1	0	0	0
9. LARNGOSCOPE ADULT X 1			
BLADE- 1 LONG; 1 SHORT	0	0	0
10. LARNGOSCOPE CHILD X 1 (LONG BLADE)	0	0	0
11. O2 CYLINDER LARGE/REGULATOR X 1	0	0	0
12. O2 SMALL (RESERVE) X 2	0	0	0
13. O2 PORTABLE/ORANGE X 1	0	0	0
14. AMBU BAG X 3 (ADULT/CHILD/INFANT)	0	0	0
15. SUCTION, PORTABLE X 1	0	0	0
16. BOARD, CPR, ORANGE X 1	0	0	0
17. BOARD, SHORT SPINAL X 1	0	0	0
18. STRECHER, SCOPE (SN4725) x 1	0	0	0
19. STRECHER, FOLDING, ORANGE X 1	0	0	0
20. STRECHER, TROLLEY, MAIN X 1	0	0	0
21. SPLINT, AIR X 1 BOX (Various type)	0	0	0
22. SPLINT, FRAC-IMMOBILIZER X 1	0	0	0
23. SPLINT, VACUUM (AS190-8) X 1 SET	0	0	0
24. SPLINT, TRACTION X 2	0	0	0
25. HEAD IMMOBILIZER 1 SET	0	0	0
26. STRAPPING, ORANGE X 6	0	0	0
27. COLLAR, EXTRACTION, ORANGE X 4	0	0	0
28. COLLAR, RIGID (Various sizes) X 4	0	0	0
29. TUBE, ETI VARIOUS SIZES	0	0	0
30. AMBU BAG, BLACK, (extra) X 1 SET	0	0	0
31. JACKET, EMT, -BLUE X 2, ORANGE X 1	0	0	0
32. HELMET, EMT, SAFETY X 3	0	0	0
33. SPLINT, PLYWOOD, various length.	0	0	0
34. OXYMETER, PULSE, PORTABLE (Sn. 20964999) X 1	0	0	0
35. HEARTSTART, WITH SPARE BATTERY (Sn. H53-9317-07819) X 1	0	0	0
36.	0	0	0
37.	0	0	0
38.	0	0	0
39.	0	0	0
40.	0	0	0

DATE : _____ 19____

AM- CHECKED BY: _____
 PM- CHECKED BY: _____
 NIGHT- CHECKED BY: _____

AMBULANCE QSG 1671 CHECKLIST

		am	pm	night
1.	IV CANULA (VARIOUS SIZES)	0	0	0
2.	DISPOSABLE GLOVES/1 BOX	0	0	0
3.	O2 FACE MASK X1	0	0	0
4.	O2 NASAL CANULA X 1	0	0	0
5.	O2 VENTI MASK X 1	0	0	0
6.	PLASTER/ADHESIVE X 1	0	0	0
7.	FORCEPS-SPONGE HOLDER X 1	0	0	0
8.	FORCEPS-MIGGIL X 1	0	0	0
9.	LARNGOSCOPE ADULT X 1 BLADE- 1 LONG; 1 SHORT	0	0	0
10.	LARNGOSCOPE CHILD X 1 (LONG BLADE)	0	0	0
11.	O2 CYLINDER LARGE/REGULATOR X 1	0	0	0
12.	O2 SMALL (RESERVE) X 2	0	0	0
13.	O2 PORTABLE/ORANGE X 1	0	0	0
14.	AMBU BAG X 3 (ADULT/CHILD/INFANT)	0	0	0
15.	SUCTION, PORTABLE X 1	0	0	0
16.	BOARD, CPR, ORANGE X 1	0	0	0
17.	BOARD, SHORT SPINAL X 1	0	0	0
18.	STRECHER, SCOPE (SN4725) x 1	0	0	0
19.	STRECHER, FOLDING, ORANGE X 1	0	0	0
20.	STRECHER, TROLLEY, MAIN X 1	0	0	0
21.	SPLINT, AIR X 1 BOX (Various type)	0	0	0
22.	SPLINT, FRAC-IMMOBILIZER X 1	0	0	0
23.	SPLINT, VACUUM (AS190-8) X 1 SET	0	0	0
24.	SPLINT, TRACTION X 2	0	0	0
25.	HEAD IMMOBILIZER 1 SET	0	0	0
26.	STRAPPING, ORANGE X 6	0	0	0
27.	COLLAR, EXTRACTION, ORANGE X 4	0	0	0
28.	COLLAR, RIGID (Various sizes) X 4	0	0	0
29.	TUBE, ETT VARIOUS SIZES	0	0	0
30.	AMBU BAG, BLACK, (extra) X 1 SET	0	0	0
31.	JACKET, EMT, -BLUE X 2, ORANGE X 1	0	0	0
32.	HELMET, EMT, SAFETY X 3	0	0	0
33.	SPLINT, PLYWOOD, various length.	0	0	0
34.	OXYMETER, PULSE, PORTABLE (Sn. 20964999) X 1	0	0	0
35.	HEARTSTART, WITH SPARE BATTERY (Sn. H53-9317-07819) X 1	0	0	0
36.		0	0	0
37.		0	0	0
38.		0	0	0
39.		0	0	0
40.		0	0	0

DATE: _____ 19____

AM- CHECKED BY: _____
 PM- CHECKED BY: _____
 NIGHT- CHECKED BY: _____

DRIVER AMBULANCE CHECK LIST

1	ENGINE STARTER START		
2	LIGHT SWITCH		HORN
	INDICATOR LIGHT		WIPERS
	PARKING LIGHT		SIREN LIGHT
	BREAK LIGHT		
3	TELEPHONE ATUR		
4	ENGINE OIL		
5	ENGINE WATER		
6	BREAK OIL SYSTEM		
7	BATTERY WATER		
8	TYRE		
	SPARETYRRE		
9	FOOT & HAND BRAKES		
10	AIRCOND		
11	TOOL & SPANER		Common Spanner 13&10
	Heel Brass No 19		Screw Driver
	Plug Spanner		Philip Screw Driver
	Common Spanner 19&17		Fuse 25 amp
	Common Spanner 13&17		
12	MAIN BATTERY 12V		
13	JACK TYRE		
14	STRETCHER SCOF		
15	STRETCHER ROC		
16	SPOT LIGHT		
17	Battery Charger Wire		
18	WARNING TRAIANGLE		
19	FIRE EXTINGUISHER		
<u>condition</u>			
DATE	1995 : :	SINGNATURE	

A/E AMBULANCE SERVICE SCHEDULE

AMBULANCE NO.	DATE	1	2	3	4	5	6	7	8	9	10	11	12
	96												
CSG 1100													
SG 2842A													
SG 2843A													
SG 2488A													
SG 3122A													
CSG 1377A													

S : Servicing

R : Repair

Weekly Plan DATE : ~ : : 1996

	MO	TU	WE	TH	FR	SA
0800						
1030						
1245						
1400						
1500						
1615						

Master File of Equipment

ID NO								
LOCATION								
DEVICE TYPE								
NAME								
MODEL								
CLASS/TYPE								
SERIAL NO								
DELIVERY DATE								
PRICE								
MAKER	NAME							
	ADDRESS							
		TEL:				FAX:		
AGENT	NAME							
	ADDRESS							
		TEL:				FAX:		
MAINTENANCE	Date	Check	Date	Check	Date	Check	Date	Check
ACCESSORY & spare		PARTICULARS						QTY
	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
14								

DEFIBRILLATOR PERFORMANCE TEST RECORD

ID NO					
Serial No					
Model					
Location					
Tecnician					
Date					
DIFFIBRILLATOR SETTING			ACTUAL DIFFIBRILLATOR OUT PUT		
50 J			J	J	
100 J			J	J	
200 J			J	J	
300 J			J	J	
360 J			J	J	
Charge Time					
50 J	sec	100 J	sec	360J	sec
Q wave Sync Time			R wave Sync time		
50 J	msec	50 J	msec		
100 J	msec	100 J	msec		
360 J	msec	360 J	msec		
Peak Voltage			Peak Current		
50 J	V	50 J	A		
100 J	V	100 J	A		
360 J	V	360 J	A		
Over Voltage			Over Current		
50 J	V	50 J	A		
100 J	V	100 J	A		
360 J	V	360 J	A		
REMARKS					

MEDICAL MACHING CHECK CIST

Test Date:
Technician Name:

Control ID	Location	Device T.	No.
Class / Type	I. II. / B. BF. CF.		
Result			
1.	Line voltage [Volts] :	L1-Earth _____ [Volts]	
		L2-Earth _____ [Volts]	
		L1-L2 _____ [Volts]	
2.	Current Consumption [AMPS] :		
3.	Earth Continuity: Test Current _____ AMP		
		_____ Ohms [0.200]	
4.	Insulation Resistance: Mains L1, L2-Case: _____ Mohms [20]		
5.	Applied Part Insulation: A		
		L1, L2-Case: _____ Mohms [Limit 20]	
		All-Case: _____ Mohms [Limit 20]	
6.	Earth Leakage: A		
	Norm Pol _____ [Limit 500]		
	No L2 _____ [Limit 500]		
	Rev Pol _____ [Limit 500]		
	No L2 _____ [Limit 500]		
7.	Enclosure Leakage: A		
	Norm Pol _____ [Limit 500]		
	No L2 _____ [Limit 500]		
	No Earth _____ [Limit 500]		
	Rev Pol _____ [Limit 500]		
	No L2 _____ [Limit 500]		
	No Earth _____ [Limit 500]		
8.	Patient Lead Leakage: A		
	All-Earth _____ [Limit 500]		
	Norm Pol _____ [Limit 500]		
	No L2 _____ [Limit 500]		
	No Earth _____ [Limit 500]		
9.	Mains on AP: A		
	Norm Pol _____ [Limit 500]		
	Rev Pol _____ [Limit 500]		
10.	Auxiliary Current:		
	A RA-ALL RL-ALL LA-ALL LL-ALL V1-V6-ALL		
	Norm Pol		
	No L2		
	No Earth		
	Rev Pol		
	No L2		
	No Earth		
11.	Comments:		

TRANSFUSION Pump Inspection Table Date _____

ID No		Model		Person in charge	
-------	--	-------	--	------------------	--

Item: Good: ✓ Cleaning: C Deterioration: △
 Adjustment: A Replacement: X

1) Visual check

- a, Appearance (damag ,deformation)
- b, Various connector on Syringe clamp
- c, Slider unit
- d, Pole clamp
- e, AC adapter
- f, AC power cord

3) Each switch operation check

- a, Power switch
- b, Flow rate selector switch
- c, Start switch
- d, Stop switch
- e, Purge switch
- f, Clear volume delivered clear switch
- g, Motor sound

2) Self check

- a, Power indication LED
- b, Each alam LED
- c, Flow rate indication :ED
- d, Operation state LED
- e, Buzzer sound LED
- g, Err indicator (Err)

4) Operation state, alarm

- a. Battery voltage _____ V
- b. Automatic syringe detection (20.30.50)
- c. Nearly empty alarm detection position
- d. Overload alarm detection pressure _____ Kg/cm²

7200 Ventilator Maintenance Record

time Control ID	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
ICU-V-1										
ICU-V-2										
ICU-V-3										
ICU-V-4										
ICU-V-5										
ICU-V-6										
ICU-V-10										
ICU-V-11										

time Control ID	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
ICU-V-1										
ICU-V-2										
ICU-V-3										
ICU-V-4										
ICU-V-5										
ICU-V-6										
ICU-V-10										
ICU-V-11										

AMBULANCE ACTIVITY CHECK LIST

CHIEF COMPLAINT

DATE:

NAME:

AGE:

SEX:

MEDICAL ASSISTANT

YES

NO

(Shift in) ~ I

MA - I - 1 Check EMT bag and ambulance equipments

(Telephone Triage) ~ II

Make sure these things are done.

IN CASE OF SICKNESS

MA - II - 1 Patient's problem.

MA - II - 2 Floor, room number, street number, landmark location

MA - II - 3 Patient's conscious level

MA - II - 4 Patient's age

MA - II - 5 Patient's sex

MA - II - 6 Patient's medical history

MA - II - 7 Caller's phone number

MA - II - 8 Ask the caller to wait outside

IN CASE OF ACCIDENT

MA - II - 9 Type of accident

MA - II - 10 In case of RTA, fighting, suicide
Call to POLICE.

MA - II - 11 In case of victim trapped in a vehicle,
call to FIRE DEPARTMENT.

	<u>YES</u>	<u>NO</u>
MA - II - 12 Number of victims	<input type="checkbox"/>	<input type="checkbox"/>
MA - II - 13 Condition of victims	<input type="checkbox"/>	<input type="checkbox"/>
MA - II - 14 Exact location	<input type="checkbox"/>	<input type="checkbox"/>
MA - II - 15 In case of all EMT cases, ring buzzer 3 times.	<input type="checkbox"/>	<input type="checkbox"/>

At the scene ~ III

MA - III - 1 Rush to the patient.	<input type="checkbox"/>	<input type="checkbox"/>
MA - III - 2 Collect information from bystanders.	<input type="checkbox"/>	<input type="checkbox"/>
MA - III - 3 Check vital signs.	<input type="checkbox"/>	<input type="checkbox"/>
MA - III - 4 In case of unconsciousness, refer FORM A (NASAL AIRWAY), B (ORAL AIRWAY).	<input type="checkbox"/>	<input type="checkbox"/>
MA - III - 5 In case of pulmonary arrest, refer FORM C (INTUBATION), D (AMBU BAG).	<input type="checkbox"/>	<input type="checkbox"/>
MA - III - 6 In case of injury, refer FORM E (WOUND)	<input type="checkbox"/>	<input type="checkbox"/>
MA - III - 7 In case of spinal injuries, use LONG SPINE BOARD.	<input type="checkbox"/>	<input type="checkbox"/>
MA - III - 7 In case of cardiac compression or immobilization, use SHORT SPINE BOARD.	<input type="checkbox"/>	<input type="checkbox"/>
MA - III - 8 In case of Ascending or descending stairs or bad condition of road, use SCOOP STRETCHER.	<input type="checkbox"/>	<input type="checkbox"/>
MA - III - 9 In case of narrow corridor, heart failure, breathing difficulty use CHAIR STRETCHER.	<input type="checkbox"/>	<input type="checkbox"/>

In ambulance/On the way to hospital ~ IV

YES

NO

MA - IV - 1 Check vital signs.

MA - IV - 2 Communicate with MA. I/C.

Arriving the hospital ~ V

MA - V - 1 Report the condition of patient to the doctor.

MA - V - 2 Make sure prehospital care report are completed.

MA - V - 3 Make sure all drugs and equipments are refill.

MA - V - 4 Switch off the main of oxygen tank and suction.

NURSE

Shift In ~ 1

	<u>YES</u>	<u>NO</u>
Ns - I - 1 Check EMT bag and ambulance equipments.	<input type="checkbox"/>	<input type="checkbox"/>

At the scene ~ II

Ns - II - 1 Prepare resuscitation equipment.	<input type="checkbox"/>	<input type="checkbox"/>
Ns - II - 2 Rush to the patient with EMT bag.	<input type="checkbox"/>	<input type="checkbox"/>
Ns - II - 3 Check vital signs.	<input type="checkbox"/>	<input type="checkbox"/>
Ns - II - 4 Assist of transferring the patient.	<input type="checkbox"/>	<input type="checkbox"/>
N - II - 6 Assist of transferring the patient.	<input type="checkbox"/>	<input type="checkbox"/>

In ambulance / on the way to hospital ~ III

Ns - III - 1 Check vital signs.	<input type="checkbox"/>	<input type="checkbox"/>
------------------------------------	--------------------------	--------------------------

Arriving the hospital ~ IV

Ns - IV - 1 Place contaminated linens in biohazard container.	<input type="checkbox"/>	<input type="checkbox"/>
Ns - IV - 2 Remove and clean all the equipments used by patient.	<input type="checkbox"/>	<input type="checkbox"/>
Ns - IV - 3 Refurnished the EMT bag.	<input type="checkbox"/>	<input type="checkbox"/>

DRIVER

Shift in ~ 1

ENGINE OFF

		<u>YES</u>	<u>NO</u>
		<input type="checkbox"/>	<input type="checkbox"/>
Dr - 1 - 1	Check body of the vehicle.	<input type="checkbox"/>	<input type="checkbox"/>
Dr - 1 - 2	Check wheels.	<input type="checkbox"/>	<input type="checkbox"/>
Dr - 1 - 3	Check tires.	<input type="checkbox"/>	<input type="checkbox"/>
Dr - 1 - 4	Check window.	<input type="checkbox"/>	<input type="checkbox"/>
Dr - 1 - 5	Check mirrors.	<input type="checkbox"/>	<input type="checkbox"/>
Dr - 1 - 6	Check operation of the doors.	<input type="checkbox"/>	<input type="checkbox"/>
Dr - 1 - 7	Check operation of the seat belt.	<input type="checkbox"/>	<input type="checkbox"/>
Dr - 1 - 8	Check pedal operation.	<input type="checkbox"/>	<input type="checkbox"/>
Dr - 1 - 9	Check transmission fluid.	<input type="checkbox"/>	<input type="checkbox"/>
Dr - 1 - 10	Check washer fluid.	<input type="checkbox"/>	<input type="checkbox"/>
Dr - 1 - 11	Check battery fluid.	<input type="checkbox"/>	<input type="checkbox"/>
Dr - 1 - 12	Check engine oil.	<input type="checkbox"/>	<input type="checkbox"/>
Dr - 1 - 13	Check brake oil.	<input type="checkbox"/>	<input type="checkbox"/>

* (9 ~ 13 morning shift and if needed)

ENGINE ON

YES

NO

Dr - I - 14 Test the siren.

Dr - I - 15 Test the microphone.

Dr - I - 16 Check warning lights.

Dr - I - 17 Check head light.

Dr - I - 18 Check turns signals.

Dr - I - 19 Check brake lights.

Dr - I - 20 Check back lights.

Dr - I - 21 Check side and rear lights.

Dr - I - 22 Operation of air conditioner.

Dr - I - 23 Drive forward and back.

At the scene ~ II

Dr - II - 1 Turn on the emergency light and siren.

Dr - II - 2 Drive safely.

Dr - II - 3 On arrival, park at a safe site.

Dr - II - 4 Rush to the patient.

Dr - II - 5 Assist MA. and nurse.

Dr - II - 6 Bring a stretcher and assist handling.

In ambulance / on the way to hospital ~ III

YES

NO

Dr - III - 1 Turn on the emergency light and siren.

Arriving the hospital ~ IV

Dr - IV - 1 Check fuel.

Dr - IV - 2 Enter the time of ambulance run and mileage.

Dr - IV - 3 Change/replace linen.

Dr - IV - 4 Change/replace empty garbage.

Dr - IV - 5 Check/refill water tank.

Dr - IV - 6 Clean patient's compartment if needed.

Dr - IV - 7 Enter the time of ambulance run and mileage.

1. DATE / /

4. CHIEF COMPLAINT

2. NAME

3. AGE

4. SEX: M, F

NASOPHARYNGEAL AIRWAY INSERTION

1. Assess the nasal passages for any apparent obstruction.
2. Select the appropriately sized airway.
3. Lubricate the nasal pharyngeal airway with a watersoluble lubricant or tap water.
4. Insert the tip of the airway into the nostril & direct it posteriorly & toward the ear.
5. Gently pass the nasal pharyngeal airway through the nostril into the hypopharynx with a slight rotating motion, until the flange rests against the nostril.
6. Ventilate the patient with a pocket face mask or bag-valve-mask device.

1. DATE / / 4. CHIEF COMPLAINT

2. NAME

3. AGE

4. SEX: M, F

NASOPHARYNGEAL AIRWAY INSERTION

- | | YES | NO |
|--|--------------------------|--------------------------|
| 1. Select the proper-sized airway. | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Open the patient's mouth with either the chin lift maneuver or the cross finger technique. | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Insert a tongue blade on top of the patient's tongue far enough back to depress the tongue adequately, being careful not gag the patient. | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Insert the airway posteriorly, gently sliding the airway over the curvature of the tongue until the device flange rests on the top of the patient's lips. | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Remove the tongue blade. | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Ventilate the patient with a pocket face mask or bag valve mask device. | <input type="checkbox"/> | <input type="checkbox"/> |

1. DATE / /

4. CHIEF COMPLAINT

2. NAME

3. AGE

4. SEX: M, F

ENDOTRACHEAL INTUBATION

YES NO

1. Assure adequate ventilation & oxygenation in progress.
2. Ensure suction equipment is immediately available.
3. Inflate the cuff of the endotracheal tube to make sure the balloon does not leak, then deflate the cuff.
4. Connect the laryngoscope blade to the handle, and check the bulb for brightness.
5. Have an assistant manually immobilize the head & neck.
6. Hold the laryngoscope in the left hand.
7. Insert the laryngoscope into the right side of the patient's mouth, displacing the tongue to the left.
8. Visually examine the epiglottis & then the vocal cords.
9. Gently insert the endotracheal tube into the trachea without applying pressure on the teeth or oral tissues.
10. Inflate the cuff with enough air to provide an adequate seal. Do not overinflate the cuff.
11. Check the placement of the endotracheal tube by bag-valve-to tube ventilation.
12. Visually observe lung expansion with ventilation.
13. Auscultate the chest & abdomen with a stethoscope to ascertain tube position.
14. Secure the tube. If the patient is moved, the tube placement should be reassessed.

1. DATE / / 4. CHIEF COMPLAINT
 2. NAME
 3. AGE 4. SEX: M, F

BAG-VALVE-MASK VENTILATION

- | | YES | NO |
|---|--------------------------|--------------------------|
| 1. Select the appropriately sized mask to fit patient's face. | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Connect oxygen tubing to the bag-valve device, & adjust the flow of oxygen to 12L / min. | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Assure the patient's airway is patent & secured by previously described techniques. | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. The first person applies the mask to the patient's face ascertaining a tight seal with both hands. | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. The second person ventilates the patient by squeezing the bag with both hands. | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. The adequacy of ventilation is assessed by observing the patient's chest movement. | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. The patient should be ventilated in this manner every five seconds. | <input type="checkbox"/> | <input type="checkbox"/> |

1. DATE / /	4. CHIEF COMPLAINT
2. NAME	
3. AGE	4. SEX: M, F

TOILET AND SUTURE OF WOUND

	YES	NO
1. Put on face mask.	<input type="checkbox"/>	<input type="checkbox"/>
2. Prepare or get ready the requirements / tray.	<input type="checkbox"/>	<input type="checkbox"/>
3. Bring the tray / requirements to the patient.	<input type="checkbox"/>	<input type="checkbox"/>
4. Explain to the patient about the procedure that is going to be performed on him / her.	<input type="checkbox"/>	<input type="checkbox"/>
5. Wash hands, using aseptic technique, and dry hands.	<input type="checkbox"/>	<input type="checkbox"/>
6. Put on a pair of sterile gloves.	<input type="checkbox"/>	<input type="checkbox"/>
7. Clean wound (from dirty to clean), use one swab once.	<input type="checkbox"/>	<input type="checkbox"/>
8. Inject the local anaesthesia around the wound.	<input type="checkbox"/>	<input type="checkbox"/>
9. Wait for while for the L.A. to take effect.	<input type="checkbox"/>	<input type="checkbox"/>
10. Repeat toilet to the wound.	<input type="checkbox"/>	<input type="checkbox"/>
11. Remove foreign body or tied up bleeding point, if necessary.	<input type="checkbox"/>	<input type="checkbox"/>
12. Assess the size of wound & prepare the needle and suturing material.	<input type="checkbox"/>	<input type="checkbox"/>
13. Begin suturing.	<input type="checkbox"/>	<input type="checkbox"/>
14. Clean wound after suturing.	<input type="checkbox"/>	<input type="checkbox"/>
15. Apply dressing to the wound.	<input type="checkbox"/>	<input type="checkbox"/>
16. Bandage / apply adhesive tape to dressing.	<input type="checkbox"/>	<input type="checkbox"/>
17. Advise patient on the follow-up treatment.	<input type="checkbox"/>	<input type="checkbox"/>
18. Clear / clean tray / requirements.	<input type="checkbox"/>	<input type="checkbox"/>
19. Record procedure.	<input type="checkbox"/>	<input type="checkbox"/>

STANDARD OPERATION PROCEDURE: EMT COURSE

NO 1

NA I/C (Counter)

NURSE

DRIVER (EMT)

When receiving ambulance calls.

Shift in

Shift in

We judge the type of emergency.

Checking EMT
medical bag & ambulance
equipments.

Checks: turning signals, warn-
ing lights, parking lights,
side lights, rear side lights,
brake, brake lights, reverse
lights, fuel and tyres, in-
cluding spare tyres.

(1) SICK
Make sure 7 things:-

1. Exact location
floor, room's number, landmark.
And ask the caller to wait out-
side and give direction
when ambulance approach.
2. Caller's phone number.
3. Patient's problem-
Ask Yes/No questions.
4. Patient's age.
5. Patient's sex.
6. Patient's medical history.
7. Patient's conscious level.

Routine

Familiarise with the roads &
buildings of the city.
Refer to the map available
at the notice board if he is
not certain.

MA I/C / MA (EMT)

NURSE

DRIVER

(2) ACCIDENT

Make sure 3 things:-

1. Type of accident.
To inform police when necessary
if RTA, fighting case, suicidal
case. Also to inform fire Depart-
ment if victims trapped in a
vehicle or fire.

2. Number of victims and also
conditions of victims

3. Exact location & caller's phone
number.

After gathering all the information
and noted down in the ambulance's
call sheet, he then rings bell 3
times to inform the EMT team.

The MA under EMT will immediately
rush to the ambulance.

MA I/C will still communicate with
the caller, give necessary advices.

On hearing the 3 ringing
tone of the bells, he
rush to the ambulance. He
make sure the exact locat-
ion.
He turn on the emergency /
ambulance light & siren.

He drives gently to the
scene.

On arrival, he look for sa-
fe parking place according
to standard protocol eg.
To parks beyond the acci-
dent car if they are first.
To park behind if police
arrived first. To parks
uphill & upwind if confirm
spilled fuel/gas.

She immediately rush to
the ambulance & make sure
all necessary things are
brought along.
To prepares equipments for
the cases.

MA

NURSE

DRIVER

At the scene

He rush to the patient and make sure it is safe for the patient & team member.

He collect informations from the relative/bystander. — Act as a team leader.

— Do a primary examination on patient.

— Establish possible diagnosis of the patient.

— Instruct the team member to initiate necessary treatment on the spot.

For patient with cardio-respiratory arrest, he should instruct the team member to start CPR.

Rush to the patient with EMT bag.

Check vital signs

For Cardiopulmonary

arrest, she assist in

CPR, preparation in in-

tubation, and set IV

line and give IV drug

when necessary.

He park the car in a place that it is most safe and convenience to load the patient.

Then, he rush to the patient

Assist MA nurse

Decide how to transfer the patient with other team members.

The suitable method of transferring patient can as below:-

1. Long spine board.

For suspected case of spinal injuries. Patient is put on Cervical collar. With proper procedure, the patient is log roll to the spinal board.

Assist in stabilizing of the head of patient, log roll and strapping of the patient.

He bring along spinal board place it near the patient & assist in log roll with command from MA.

He bring along Suitable patient carriage device

MA

NURSE

DRIVER

2. Short spine board for immobilization, cardiac compression. Place it below a mattress at the head of a stretcher.
3. Scoop stretcher Make sure to avoid nipping a patient's buttock with it. Make sure it is lock & patient is fasten by straps properly.
4. Chair stretcher. It is use when there is narrow corridor or small elevator.

Assist in handling & fastening the straps.

Assist in handling & fastening of patient

Assist in handling

Places it close to the patient, Assist in handling & log roll the patient.

He place the scoop stretcher parallel to the patient, adjust the length. Operate it properly.

Assist in handling

5. other methods include:

1. Blanket drug
 2. using three crews
 3. Chair to wheel chair.
 4. Two person walking assist.
 5. Raising the stretcher with a patient.
 6. Ascending & descending stairs with a load stretcher.
 7. Loading knockdown stretcher into the ambulance.
- With either methods, finally the patient is put on ambulance stretcher, & safely landed in ambulance.

Follow proper technique & procedure in handling & transfer of patient. With verbal command. from MA.

Follow proper technique & procedure in handling & transfer of patient. With verbal command from MA.

MA

NURSE

DRIVER

In ambulance/On the way to hospital Monitoring vital sign of patient.

On all emergency lights/siren, make sure a safe & clear way to hospital.

Re-assess the patient.
Give further treatment if required
Communicate with A/E doctor reporting about the condition of the case.

Continue Patient Assessment

Arriving the hospital.

Report the condition of patient to the doctor, possible diagnosis & treatment given before arrival, patient chief complaints & past medical history.
After handling over the case, he make sure that the ambulance call formate is properly filled.
Make sure all drugs and equipments are rechecked.
Ready for next Run.

She place contaminated linens in biohazard container.
She remove & clean all the equipments used by patient.
Replace & refill all drug & equipments used.

He check the ambulance like the shift in check.
Clean the inside especially the patient's stretcher area with antiseptic lotion.
Put on new linen.
Off the main of Oxygen tank or suction.
Enter the time of ambulance run & mileage.

3. Training Courses Implemented

No	Established Course	Participants	Year Started	No. of Course Conducted	Date Handing Over	No. of Participants	No. of Speakers	Teaching Materials
1	ATM	MO, MA, NS	12/93	4	01/97	83		5 Text 1 - Slide 500 (Over lap to BTM)
2	BTM	MA, NS	05/94	10	07/96	142		8 Text 1 - Slide 500 (Over lap to ATM)
3	First Aid Course	Attendants Drivers	12/94	8	07/96	162		13 Text 1 - (Ready Book Panduan Pertolongan Cemas)
4	EMS Driver Course	Drivers	11/95	10	07/96	63		1 VHS Instruction Video 1
5	EMT Course	MA, NS, Driver	08/96	9	09/96	85		1 Stage 1 - Manuscript 1. Slide 35 Transparency 31. Stage 2 - Manuscript 1. Slide 83 Transparency 36. Stage 3 - VHS Video! Demonstration Video!. Stage 4 - Practical Training 2.
6	Disaster Management Course	MA, NS, Driver	06/96	3	09/96	73		1 Manuscript 1 - Transparency 39 Slide 39 - VHS Video Mini Disaster drill at Airport 1
7	Ventilator Course	MO, MA, NS	11/95	7	04/97	142		5 Text 1 - Slide 358
8	OI Nursing Course	NS	02/96	6	04/97	87		5 Text 1 - Slide 362 Video 1
9	Electrical Safety & Maintenance of Electromedical Equipment	MA, NS	07/94	14	07/96	307		1 Text 1 - Slide 185
10	Basic ECG Course	MA, NS	09/93	13	07/96	238		6 Text 1 - Slide 218
11	Intermediate ECG Course	MA, NS	08/95	4	07/96	125		5 Notes 6 sets Slide 129

* For objectives and contents, please refer to pages attached.

1. Advanced Trauma Management Courses

Course Objective

1. Demonstrate an understanding of the concepts, principle, skills, and techniques used in initial patient management.
2. Established management priorities in a trauma situation.
3. Initiate a primary and secondary management necessary within the first hour of Emergency Care, for acute life - threatening emergencies.
4. Demonstrate the skills necessary in the initial management trauma victims.
5. Development of instructors and lecturers for the "Basic Trauma Management Course". We have been organising this basic course in Sarawak for medical assistants and nurses. Those who passed this advanced course will be considered capable of being the instructors for the basic course.

Reason for Conducting Course

1. The need for upgrading emergency medical service has been emphasised recently.
2. Because of increasing road traffic accidents and industry related injuries, trauma is one of the most common reason to visit A & E.
3. In order to reduce the number of preventable trauma deaths and complications, it is known that proper initial management should be given as soon as possible.
4. Medical officers working in A & E should be trained to be able to manage trauma victims properly.

Contents

1. Initial Assessment
2. Airway and Ventilatory Management.
3. Shock
4. Burn Injuries
5. Stabilization and Transport
6. Head Trauma
7. Trauma X-ray
8. Initial Assessment Orientation & Demonstration
9. Skill Station Part I
 - Venous Cut Down
 - Peritoneal Lavage
 - Chest Tube Insertion
 - Cricothyroidotomy (Pericardiocentesis)
10. Thoracic Trauma
11. Abdominal Trauma

12. Spinal Trauma
13. Extremity Trauma
14. Disaster; Triage Scenarios
15. Skill Stations Part2
16. Immobilization Techniques
17. Circulatory Management
18. Trauma Radiology
19. MCQ Test
20. Explanation for Moulage

2. BTM

Course Objectives

Improve the initial trauma care provided by MAS and Nurses at A&E by;

1. Understanding the basic pathology of major trauma and strategy of management.
2. Being able to assess the patient for life threatening conditions and give priority to respective care.
3. Being able to practice some basic procedures and treatment.

Reason for Conducting Course

The need for upgrading emergency medical service has been emphasised recently. Because of increasing road traffic accidents and industry related injuries, trauma is one of the most common reason to visit A&E. In order to reduce the number of preventable trauma deaths and complications, it is known that proper initial management should be given as soon as possible. Under the present situation in Sarawak the paramedics are the front line medical staff to attend such patients, it is necessary to give them proper training.

Contents

1. Trauma overview.
2. Airway and Ventilatory Management.
3. Initial assessment.
4. Shock
5. Thoracic Trauma.
6. Abdominal Trauma.
7. Paediatric Trauma.

8. Head Trauma.
9. Demonstration for moulage station.
10. Patient handling, transportation and referral.
11. Extremity Trauma.
12. Spine and Spinal Cord Trauma.
13. Burn Trauma
14. Prehospital Care.
15. Disaster Scenario.
16. Practical Station (Airway, Patient Handling, Surgical skill, X-ray, Physical exam, Splinting)

3. Emergency First Aid Course

Course Objectives

By the time the course is completed the participants will be able to

1. Assess a situation quickly and safely.
2. Prevent the injury or condition becoming worse.

Reasons for Conducting Course

The ERT (Emergency and Rescue Team) of KOMAG U.S.A (MALAYSIA) one of the industrial companies in Kuching, are selected from various categories of staff of the above company. They include an industrial nurse, technicians of various disciplines, security personnel and others. Their main purpose is to do rescue work and administer first aid to victims anytime an accident occur.

At the moment in the time, they are not properly trained to do proper first aid and handling of victims during any incident. The main aim of the course was to prepare them and other similar public members for any event that may occur so that they will be more competent to perform their work.

Contents

1. Victim Assessment.
2. Basic Life Support.
3. Shock.
4. Bleeding and Wounds.
5. Specific Body Area Injuries.

6. Poisoning
7. Burn and Scalds.
8. Bone, Joint and Muscle Injuries.
9. Medical Emergencies.
10. Emergency Child Birth.
11. Moving and Rescuing Victims.
12. Skill Station (CPR, Dressing & Bandages, Splinting, Handling & Transport).

4. Emergency Medical Service (EMS) Driver Course

Course Objectives

1. To upgrade pre-hospital care service by way of improving driving techniques as well as enhancing the proper handling of Emergency medical equipment.

Contents

1. Lectures on Driving techniques
2. Ambulance activities
3. Field Practice

5. Emergency Medical Technique (EMT) Course

Course Objectives

1. To enable the staff to carry out emergency patient assessment and emergency care procedures.

Contents

1. Lectures and Practice session on various topics on emergency medical care service such as CPR, airway management, Triage, various injuries, burns management, medical injuries, ambulance run & communications, etc.
2. Disaster Management course was incorporated into this course for the purpose of enhancement of emergency care service in case of disaster.

6. Disaster Management

Course Objectives

1. Be able to assess the scene, establish the best location for the command, triage and transportation post.
2. Able to report the situation to the control centre, identify the equipment and assistance needed.
3. Standby response at the scene for the second team, fire brigade, police department, etc.
4. Establish the medical command line and flow of victims at the scene.
5. Make one way in and out for the other emergency vehicles at the scene.
6. Be able to organise and form the major "five teams" at the emergency department.
7. To be able to activate and implement the disaster protocol.

7. Ventilator Course

Course Objectives

By the time the course is completed the participants will be able to

1. Understand Anatomy and Physiology of the respiratory system.
2. Understand Basic Principles of Ventilation.
 - (a) Volume, Time and Pressure cycled.
 - (b) CMV, SIMV and CPAP Mode.
3. Understand different types of Ventilator.
 - (a) ADULT Ventilator.
 - (b) PAEDIATRIC Ventilator.
 - (c) PORTABLE Ventilator.
4. Fundamentals of operating & maintenance of Ventilator.
5. Understand additional Equipment related to Ventilators.
 - (a) Pulse Oxymeter.
 - (b) Nebuliser.
 - (c) Humidifier.
 - (d) Air Compressor.
 - (e) CO2 Monitor.

Reason for Conducting Course

This course was necessary for Doctors, Medical Assistants and Nurses to understand how to operate a Ventilator, and to detect problems when patient is put on a Ventilator. Most staff have never handle a ventilator before; therefore it was important for them to know the basic principles, the various types of ventilator and the different modes used on a ventilator.

Contents

1. Basic Anatomy and Physiology of the Respiratory system.
2. Mechanical Ventilation Support & Ventilator.
3. Type of Ventilator
4. ABG
5. Additional Equipment.
6. Operating & Handling.
7. Ventilator Maintenance.

8. Operating Theatre Nursing Course

Course Objectives

1. Acquire some basic principles and techniques of Operation Theatre Nursing.
2. Enhance understanding of aseptic principles.
3. Understand each person's role and responsibility in the Operation Theatre.

Reasons for Conducting Course

1. To assist A / E nurses, the majority of whom have no previous operating room experience.
2. To provide some basic principles and aseptic techniques on which the nurses can build a strong nursing foundation.

Contents

1. Operating Theatre Preparation
2. Operating Theatre Members
3. Positioning
4. Skin Preparation

5. Principles of Draping
6. Basic Instruments
7. Hemostasis, Suture Needles, Suture
8. Disinfectant and Sterilization
9. Anaesthesia
10. Pre-Operating Nursing Care
11. Post-Operating Nursing Care
12. How to scrub

9. Electrical Safety and Maintenance of Electromedical Equipment

Course Objectives

By the time the course is completed the participants will be able to

1. Understand theory and principle of Electronics.
2. Understand Electrical Safety (Micro, Macroshock).
3. Fundamentals in handling of Medical Equipment.
4. Appropriate maintenance of Medical Equipment Daily.
(Before use, using after use) and inspection Regular inspection.

Reason for Conducting Course

This course was necessary to upgrade the quality of medical care because it provided essential knowledge on Safety and maintenance of Medical Equipment.

All users needed to understand the importance of regular inspection and maintenance of medical equipment.

More than 50% of medical equipment failure were caused by user's misuse, carelessness, and lack of experience.

Contents

1. Theory and principle of Electronics.
2. Electrical safety and earthing.
3. Actual problem.
4. Breakdown cause.
5. Maintenance and safety control.

6. Battery charging.

10. Basic ECG Course

Course Objectives

By the time the course is completed, the participants will be able to

1. Operate an ECG Machine.
2. Recognize a normal 12-lead ECG.
3. Recognize arrhythmias.

Reasons for Conducting Course

Nurses should know how to operate an ECG machine and should detect arrhythmias when a patient is monitored on ECG. However, most of them had never learn about ECG. A systematic course on ECG was necessary for nurses.

Contents

1. Anatomy & Physiology of the Heart.
2. How to Operate an ECG Machine.
3. Normal ECG.
4. Life-Threatening Ventricular Arrhythmias.
5. Supraventricular Arrhythmias.
6. Premature Complexes.
7. AV Block.
8. Practical Session.
9. ECG Recognition Training.

11. Intermediate ECG Course

Course Objectives

By the time the course is completed, the participants will be able to

1. Use the five step rhythm analysis method to interpret the following arrhythmias:
 - (a) Sinus rhythms.
 - (b) Premature atrial complexes
 - (c) Atrial flutter.
 - (d) Atrial fibrillation.
 - (e) Supraventricular tachycardias
 - (f) Junctional rhythms.
 - (g) Premature ventricular complexes.
 - (h) Ventricular tachycardias.
 - (i) Ventricular fibrillation.
 - (j) Idioventricular rhythms.
 - (k) Atrioventricular block.

2. List the basic management for the above arrhythmias.

Reasons for Conducting Course

The needs for intermediate ECG training course for nurses and Mas who have passed the basic ECG course had been emphasized since the first Basic ECG course was conducted. The Intermediate ECG course was designed to provide more sophisticated understanding of arrhythmias and as a support for future learning in the area of electrocardiography.

Teaching Modules and Materials

1. Textbooks with slides

Basic ECG Course
Basic Trauma Management Course
Advance Trauma Life Support Course

Electrical Safety and Maintenance of Electro-medical Equipment
Handling and Operating Disaster Equipment

Ventilator Course
Fundamentals of Operating Theatre Nursing

EMS driver Course
Disaster Management
Disaster Management EMT Course

Basic Knowledge of Brain Surgery
Management of Respiratory
Treatment of Asthma
Management of Neonatus and immature infant
Burn injury, Chest trauma, Abdominal trauma

2. Video Tapes

'94 National Conference on Emergency Medical Service
ATLS Course, 11 - 12 Dec. 1994
EMS driver-Ambulance Activity
Disaster Drill (9 Dec. '95)
Disaster Drill at Kuching Airport
Disaster Drill at A&E Department

3. Pamphlet

What is emergency / non-emergency ? (English, Bahasa, Chinese)
JICA A&E Care Service Project
Prevention of Asthma (English, Bahasa, Chinese)
Paediatric Emergency (English, Bahasa, Chinese)
Proceedings of '94 National Conference on Emergency Medical Service
Proceedings of '96 National Conference on Disaster Management

4. Report

Report on Evaluation of Upgrading Emergency Care Service in A&E, SGH
(June 1995)

Reports of Counterpart Training courses
Reports by JICA experts
Final Evaluation Survey Report

Monetary inputs of JICA and Malaysian side

1. JAPANESE SIDE (x RM 1,000)							
Fiscal / Year	1992	1993	1994	1995	1996	1997	Total
Expert dispatch	961.00	1,496.00	2,020.00	1,830.00	1,776.00	422.80	8,505.80
C/P training in Japan	44.00	48.00	94.50	82.90	81.40	40.40	391.20
C/P training in Singapore	-	-	61.00	-	266.00	-	327.00
Mission dispatch	-	95.00	108.10	-	45.80	39.30	288.20
Equipment	1,874.00	1,004.90	740.40	-	999.30	-	4,618.60
Accompanied equipment	153.90	108.30	57.40	102.10	89.90	11.10	522.70
Local Cost	117.40	202.40	229.60	181.50	175.10	50.20	956.20
Total	3,150.30	2,954.60	3,311.00	2,196.50	3,433.50	563.80	15,609.70

2. MALAYSIAN SIDE							
Fiscal/Year	1992	1993	1994	1995	1996	1997	Total
Equipment	-	-	-	-	19,310	-	19,310
General expenditure	3,000	52,687	-	100,000	100,000	100,000	355,687
Travelling	3,000	9,657	10,000	15,820	26,170	15,000	19,647
Materials Supplies	7,000	3,880	2,880	3,600	9,000	-	26,360
A/E Renovation	-	-	141,112	-	-	-	141,112
Total	13,000	66,224	153,992	119,420	154,480	115,000	622,116

Note: The exact figures are not available for the general expenditure and materials supplies have not been separated from OPD.

REFERENCES

*References for
Evaluation of the Project for
Upgrading Accident & Emergency
Care Services in Sarawak*

June 28, 1997

OPERATIONAL POLICIES OF A&E DEPARTMENT

1. Location

The A&E Department is located at the single-storey, ground-floor level building adjacent to the new specialist block. It is the second building on the right upon entry through the Main Hospital Gate at Tan Sri Ong Kee Hui Road.

2. Organisation Of A&E Dept.

2.1 Manpower (Refer Appendix I)

The Accident & Emergency Dept. will be managed by a Head of Department who initially is a Senior Medical Officer. Eventually, the Head of A&E Dept. will be a Consultant/Specialist specialising in Emergency Medicine. He/she will be supported by other Consultants, Senior Medical Officers and Medical Officers. A Specialist from Orthopaedic/Surgical/Medical Department should be assigned to oversee the A&E Department. However the present manpower situation of the Sarawak General Hospital does not make this possible.

The MOIC Incharge of A&E Department will be responsible for:

- (i) Implementing the operational policies as set out for the Department by the Ministry's and the Hospital's Administration and for the day to day administration of the Department.
- (ii) Drawing up the Standing Orders for the Dept. and for ensuring that all members of the staff are familiar with them.
- (iii) Drawing up the Guidelines for emergency care of patients/disasters. (This should be based on existing Ministry of Health's guidelines and also with input from relevant specialists.

The Head of Department will do the following:

- (i) Conduct regular meetings of the Department's staff to ensure that all guidelines and Standing Orders are understood and complied with.
- (ii) Ensure that procedures for dealing with emergencies as set out in the Standing Orders are rehearsed from time to time.

2.2 Functional (Refer Appendix II)

The Accident & Emergency Department is to serve all emergencies. Provision of emergency and immediate treatment is top priority for all emergency cases. For definition of Emergency, please refer Appendix IV.

2.2.1 Functions

- : To provide 24-hours A&E services, inclusive of 24-hours ambulance services.
- : To provide 3 levels of A&E care namely:
 - Pre-hospital care
 - Hospital care
 - Training of medical and para-medical staff in A&E services.

3. Philosophy Of A&E Department (Refer Appendix III)

4. Specific Exclusions

General and/or specialist non-emergency follow-up patients will be excluded unless it is an emergency.

5. Administration

5.1 Staffing

The present Accident & Emergency Department will be upgraded to a full-fledged department. Headed initially by a senior Medical Officer but eventually by a Specialist.

The Head of the A&E Dept. will initially be supported by 6 Medical Officers, 1 Senior Medical Assistant, 13 Medical Assistants, Nurses, Radiographers, Attendants and Ambulance Drivers.

The nursing team will be headed by a Nursing Sisters. Midwifery-trained Staff Nurses and J.Ds. will be required to accompany the ambulance, for emergency resuscitation and treatment, at the Observation/ Recovery Wards, to assist the doctor at the Consultant/Examination and Treatment Rooms, Operating Theatres and to manage the Triage System.

A team of Medical Assistants headed by a Senior Medical Assistant will manage the Triage System as well as to be incharge of Ambulance Services, for standby and to accompany the ambulance, and to

assist in the Emergency Resuscitation Room, Treatment Room, Plaster Room and Operating Theatres. Radiographers will be required to operate the X-ray Unit and the mobile x-ray apparatus on a 24 hours basis.

Lab. Technologist(s) will be required to operate emergency and simple/basic lab. services inclusive of Blood Bank services for emergency transfusion on a 24 hours basis.

The after-office hours/A&E Pharmacy will only supply medications/drugs sufficient for one day for general outpatients and A&E patients deemed fit to be discharged home after examination and/or treatment for minor illnesses/injuries. This pharmacy can be manned either by a Pharmacy Assistant or a Medical Assistant.

The reception/registration/admission of patients will be done by the staff manning the reception counter.

A team of attendants/porters will be required to perform duties ranging from portering, obtaining patient records to general maintenance of the department.

A team of ambulance drivers will be required to provide 24 hours ambulance services.

5.2 Patient Flow (Appendix IV)

All patients attending the A&E Dept., irrespective of, their condition and whatever they have been referred by a doctor or attended on their own shall be registered and seen by the A&E Doctor. They will initially be assessed by a triage Medical Assistant unless the patient's condition warrants immediate attention by a Medical Officer. Their condition shall be assessed and either admitted into hospital or given symptomatic treatment for the duration of the night. Patients given symptomatic treatment should then be:

- (i) Advised to attend their own GP or nearest Government Polyclinic/OPD for further treatment the following day, or.
- (ii) Referred to the Specialist Outpatient Clinic on the appointed date if they are thought to require specialist attention.

Patients requiring observation will be lodged in the Observation Ward. Such patients will generally not be kept for more than 12 hours, after which they will be reviewed and either discharged or admitted into the hospital wards.

Patients requiring the opinion or immediate attention of a Specialist will be lodged in the Observation Ward and the respective Consultant or Registrar on-call will be requested to attend to the patient within the A&E Dept.

5.3 Reception

All patients presenting at the A&E Dept. must be received and attended to at the Reception Counter.

5.4 Registration

Registration of all patients attending the A&E Dept. will be the responsibility of Counter Clerks. A register of all cases attending the Dept. will be maintained providing among other information the identification details of the patient, date and time of attention, name of Medical Officer attending and the disposal of the patient.

5.5 Triage System (Refer Appendix V)

5.5.1 This is purely for internal use in the A&E Dept. Definition of Triage Priorities according to severity or urgency of the presenting complaint/clinical state of the patient is done in a separate place away from the A&E Reception Counter i.e. the triage room.

5.5.2 The Triage Team will initially consists of Medical Assistants and Staff Nurses, who in turn will be supervised by Chief/Senior Medical Assistant and/or Nursing Sisters. Ultimate responsibility for screening of patients presenting themselves at the Dept. lies with the Medical Officer on duty. However, the Triage Team staff must refer urgent cases for early attention and problem cases to the Medical Officer for a decision.

5.5.3 A colour coding system is adopted for designation of Area for Patient Care for each Triage Priority.

- Red - Triage Priority: Critical Patients
Area for Patient Care:
Resuscitation Room.
- Blue - Triage Priority: Intermediate
Patients Area for Patient Care:
Examination Room and Intermediate
Cubicles.
- Green - Triage Priority: Non-emergency
Patients Area for Patient Care:
Non A&E General OPD Section.

5.5.4 All patients attending the A&E Dept. will be classified into Critically Ill, Intermediate and Non-emergency Cases and will be treated in separate areas within the department.

5.5.5 Acutely/critically ill cases will be directed by the Triage Staff to be wheeled straight into the Resuscitation Room for immediate attention.

The O.T., ICU/CCU or the relevant wards will be informed of impending transfer of patients to these areas.

5.5.6 If it is known that a critical case is arriving, the medical team will standby in the Resuscitation Room.

5.5.7 All critically ill patients will be attended to by the doctor first and then admitted into hospital or given the necessary treatment before the registration formalities are attended to.

5.5.8 All emergency or critically ill patients will be admitted into hospital wards or direct into the ICU/CCU according to the admission policy of these units.

5.5.9 All patients, other than the critically ill or the stretcher patients, will be required to register first before being attended to by the doctor.

- 5.5.10 At the Triage Cubicle, all patients will have their vital signs taken, simple screening investigations done, and short case history taken. All these are to be done by the Triage Medical Assistant or Staff Nurse.
- 5.5.11 After triage, non-acute cases presenting at the A&E Dept. will be directed to receive treatment either at the A&E Dept. or at the general outpatient/non A&E clinic adjoining A&E treatment/examination cubicles.

5.6 Admission

- 5.6.1 All admissions into inpatient departments wards/ICU/CCU of A&E patients must take place at the Admission Counter of the Hospital, except after 9.00 p.m. where admission will be done at the Reception Counter of the A&E Dept.
- 5.6.2 Patients referred by GPs, OPD/Polyclinics, outstation hospitals or Klinik Desas will be registered and assessed. They will either be admitted or referred to the Specialist Outpatient Clinic for further investigation or management or referred back to the OPD or GP for management if they do not meet the criteria for hospital admission.
- 5.6.3 Non-emergency, elective patients referred by GPs, OPD/Polyclinics, outstation hospitals or Klinik Desas for investigation will re-directed to the Specialist Outpatient Clinics for attention should they require specialist care. If otherwise, they are referred back to the Polyclinic for the relevant investigations to be done on an out-patient basis.
- 5.6.4 A&E patients after being attended to by the A&E Doctor and/or Specialist of relevant Inpatient Departments may be admitted to the Observation Ward for a period of observation or recovery after being operated upon in the Operating Theatre of the A&E Dept.

6. A&E Records System

Documentation of A&E patient records will eventually be computerized. However, at present, this will be done manually.

Except for Medico-Legal cases, Diabetes Mellitus, Hypertension and Ischaemic Heart Disease, all A&E patient cards will be given back to the patients for safe-keeping, using the Home-Based Card System.

All future computerized A&E patient registration records will be linked to the wards, x-ray, Pharmacy, Lab. and Bill-payment counters.

A patient presenting at the A&E Dept. will be registered and an OPD record card be opened. An accurate medical record will be maintained for every patient attending the Dept.

If a patient warrants admission, he/she will be admitted at the admission counter.

7. Ambulance Services

The Ambulance Services will operate on 24 hours basis. It should be upgraded to a level where active resuscitation can start at the scene of the accident/emergency.

Initially, the composition of the Ambulance Crew shall consist of a Medical Assistant, a midwifery-trained Staff Nurse and an Ambulance Driver. The paramedics should be trained in Basic Cardiac-Life Support and/or Advanced Cardiac-Life Support. Eventually, selected Ambulance Drivers trained in Basic Life Support including handling of patients at the site of emergency/accident and a Doctor will make up the Ambulance Crew in addition to a Medical Assistant and/or Nurse.

A radio system should be installed to facilitate better communication between the Ambulance and the A&E Dept.

8. Examination Of Patients

Examination/Treatment Rooms/Cubicles should be provided for consultation of cases. A room should also be provided for specific services such as gynaecology/rape cases or noisy patients/children.

In the event of a major disaster the Resuscitation/Observation Rooms can be opened up to provide a big area to cope with the big number of A&E patients arriving at the same time.

9. Observation Of Patients

- 9.1 If the condition of the patient does not necessitate admission but there is potential risk of deterioration of his/her condition, the patient is held in the A&E Observation Ward.
- 9.2 The period of observation should not exceed 12 hours. Cases exceeding 12 hours observation must be admitted to the hospital wards.
- 9.3 Foods will be provided by the hospital kitchen.

10. Investigations

- 10.1 Patients requiring radiological investigations will have their initial investigations carried out in the Resuscitation Room within the A&E Dept.
- 10.2 The mini-laboratory attached to the A&E will be used for investigations for emergency cases. However, these investigations will be limited to a minimum.

11. Follow-up

No follow-up clinics will be carried out in the A&E Dept. However patients who are advised to return, like head injury cases, should symptoms recur will be attended to within A&E Dept.

12. Care Of The Deceased

A space should be provided for holding the dead prior to transfer to the mortuary.

13. Equipment

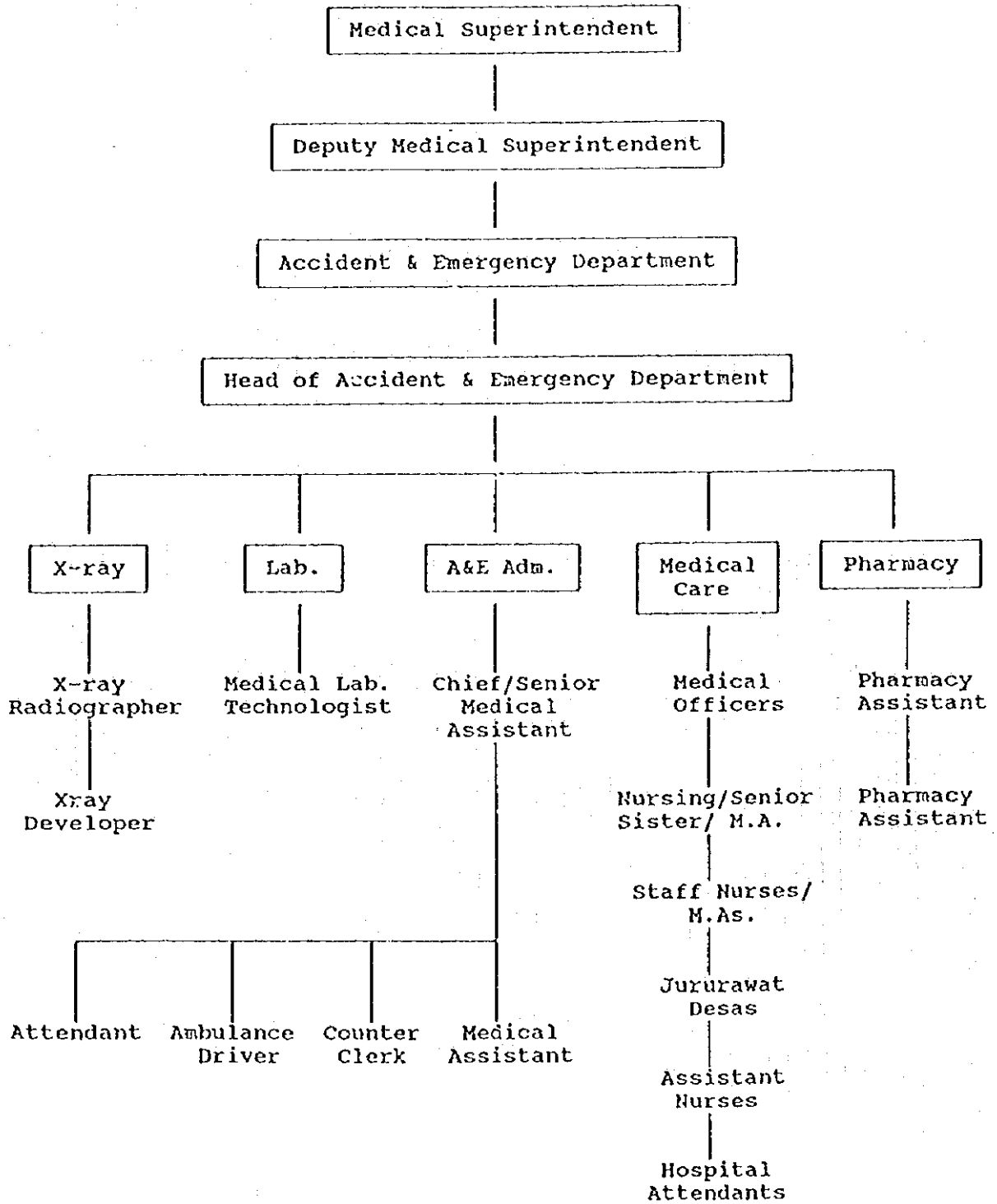
The A&E Dept. should be well equipped and have a standard list of equipments. Before any sophisticated instruments/equipments are used, the staff must be adequately trained to use and maintain them.

14. Training

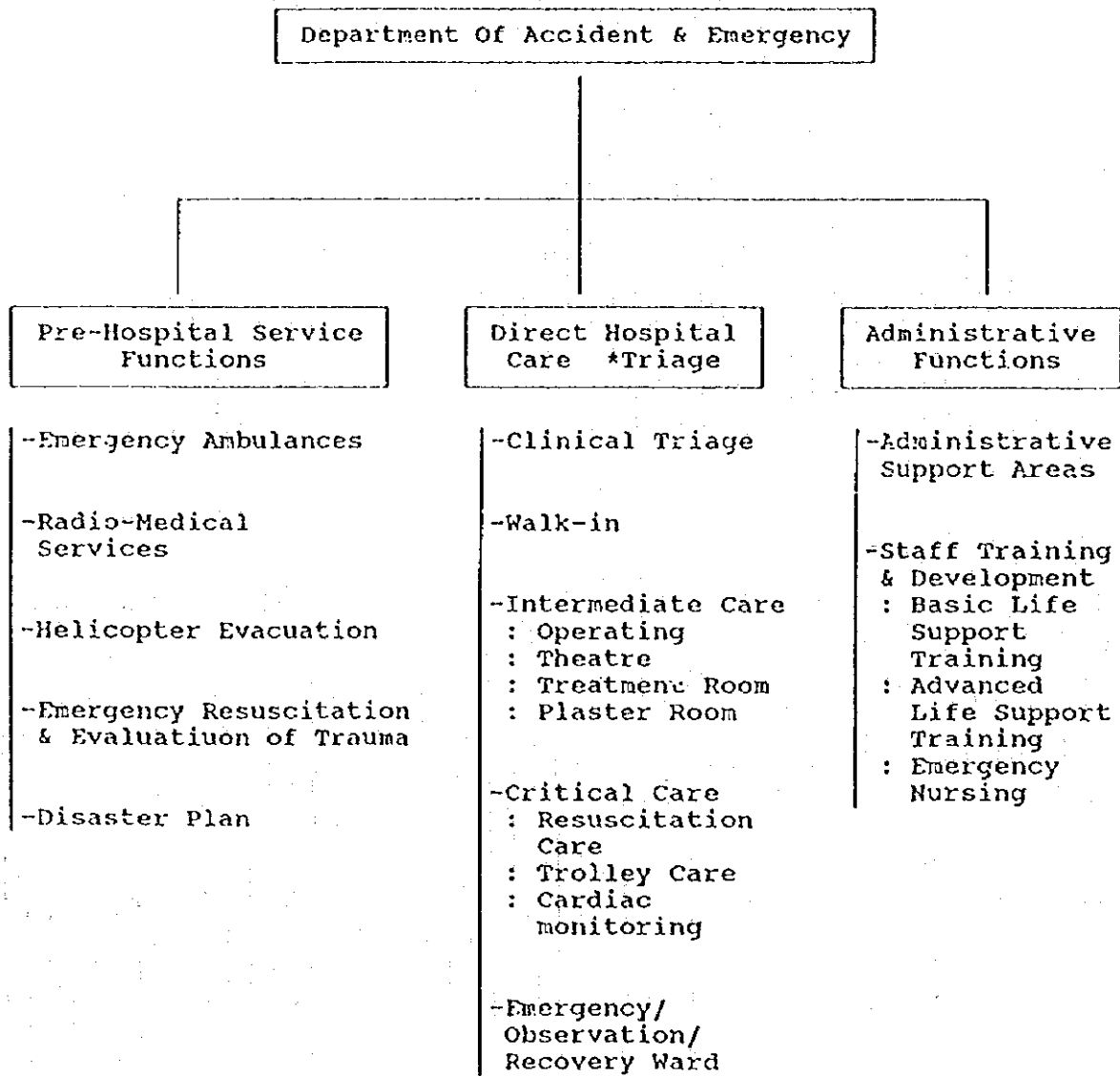
- 14.1 The skill of medical, paramedical and other staff category should commensurate with the expected level of care provided.

- 14.2 All medical and paramedical staff should have specialised training in A&E services. Training could be conducted both at local and/or overseas levels.
- 14.3 Specific job assignments at local level should be developed for all categories of staff to ensure effective and efficient delivery of service.
- 14.4 The A&E Dept. is also to be considered/included in the training programme for doctors.
- 14.5 Curriculum for training purposes should be developed.

A&E DEPARTMENT ORGANISATION CHART (MANPOWER)



ACE DEPARTMENT ORGANISATION CHART (FUNCTIONAL)



PHILOSOPHY OF A&E DEPARTMENT

Emphasizes the "Vision of Excellence" of Sarawak General Hospital.

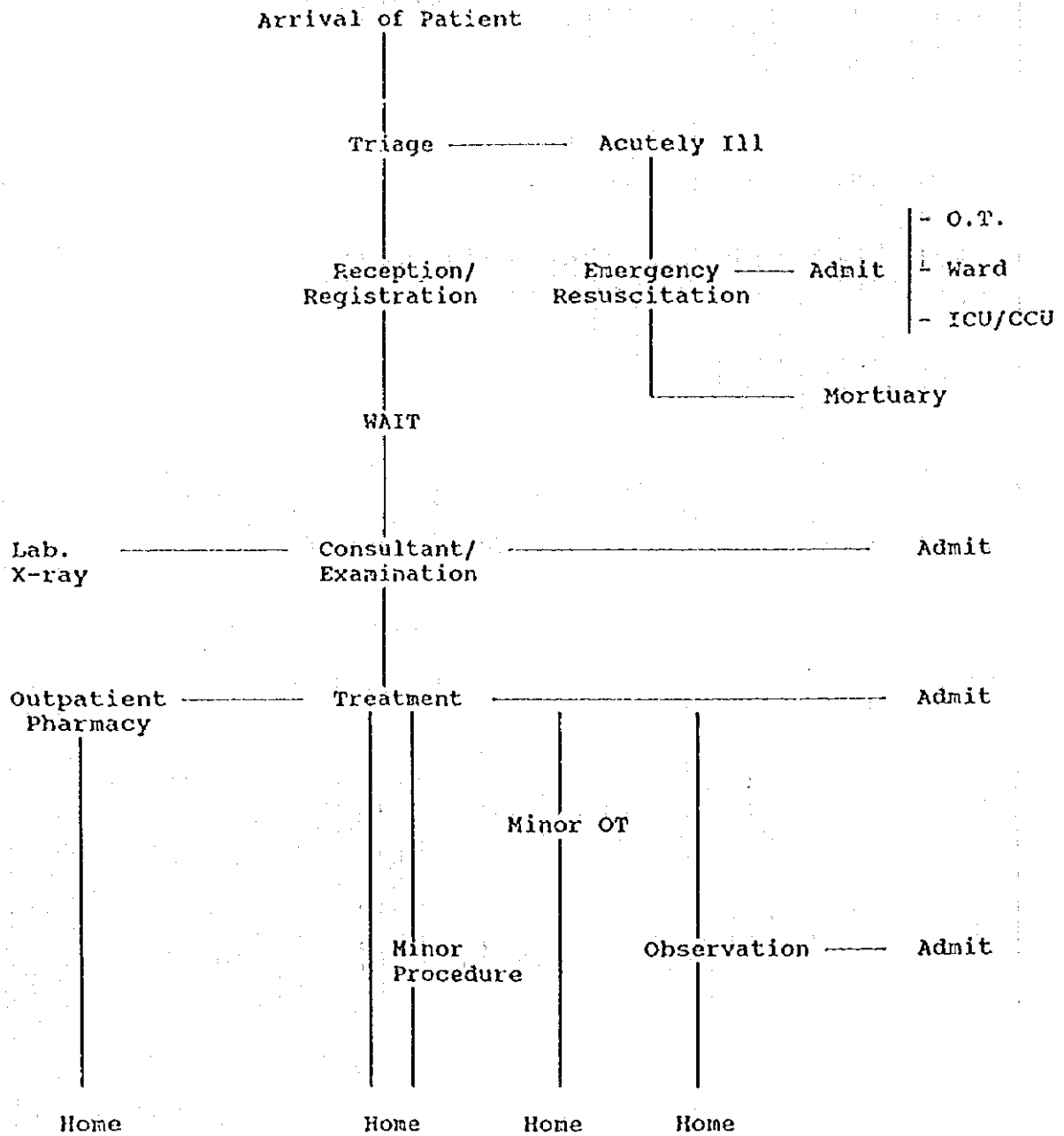
Provides a 24-hour service.

Aims to provide effective, efficient and considerate service to the public at all times.

The Accident and Emergency Department will maintain a philosophy of patient that it will:

1. Receive, assess and treat all accident patients, trauma patients, medical surgical and obstetric & gynaecological emergencies with proficiency efficiency, quality and concern.
2. Uphold the goal of excellence in emergency medical care services by providing courteous, considerate and the best service to its patients at all times.
3. Make readily available ancillary services that are essential to maintaining effective emergency medical care.
4. Provide an on-going adequate level of training and education for doctors, nurses, medical assistants and other categories of A&E staff.

Patient Flow In Accident & Emergency Department



TRIAGE AT THE A&E DEPARTMENT,
SARAWAK GENERAL HOSPITAL, KUCHING.
=====

Definition

TRIAGE is the process of sorting of casualties to determine priorities in medical attention, treatment and disposal.

Objective

The objective of triage is to ensure that the timeliness and nature of medical care provided to casualties is appropriate.

Execution

A. Concept

At the A&E Department, Sarawak General Hospital, Triage cubicles will be established so that the function of triage may be adequately executed.

B. Triage Priorities

Three priorities are designated for triage - They are:

(1) CRITICAL PATIENTS

(a) Definition:

All patients with major emergencies requiring the patient to be placed on a trolley for an adequate assessment of the patient and for reasonable patient management. Example of patients in the category is given in Annex A.

(b) Area For Patient Care: Two areas.

: Resuscitation Area:

For seriously ill patients who are either in cardiovascular collapse or in danger of imminent collapse. Please refer to Annex A for examples. Such patients will be referred to the Resuscitation Room. All these patients should be seen immediately on arrival. The waiting time for these patients shall be 0 (zero) minutes.

: Trolley Area:

For all other critical patients whose clinical condition does not necessitate management in the Resuscitation Room. Examples are given in Annex A. All such patients will be attended to in the A&E Dept. Examination & Treatment Cubicles 1 & 2. The waiting time of these patients for medical attention must not exceed five minutes.

(c) Colour Coding: RED

(2) INTERMEDIATE PATIENTS

(a) Definition:

All other patients with emergency medical conditions as defined by MOH Guidelines on classification of A&E patients, but who do not fulfil the criteria for critical care. Examples are given in Annex B.

(b) Areas For Patient Care:

A&E Dept. Examination and Treatment Cubicles 3 & 4. The waiting time for these patients must not exceed fifteen minutes.

(c) Colour Coding: BLUE

(3) WALK-IN PATIENTS

(a) Definition:

All patients with non-emergency medical conditions. Examples of these conditions are given in Annex C.

(b) Areas For Patient Care:

Non A&E General OPD Examination & Treatment Room. The waiting time of these patients for medical attention must not exceed 30 minutes.

(c) Colour Coding: GREEN

C. Mode Of Triage

For all patients attended at A&E Dept., Sarawak General Hospital the triage process is carried out as follows or provided in the format of Triage Cards for trauma & non-trauma:

- (1) Temperature, Pulse Rate, Respiratory Rate and Blood Pressure - whenever possible.
- (2) Chief complaint to be recorded.
- (3) Obvious basic investigations may and should be ordered by the triage team as follows:
 - (a) X-Rays
Patients with obvious fractures, ingested or other foreign bodies or complaints that would usually require a plain x-ray.
 - (b) ECG
All adults with chest pain, dyspnoea, dizziness, or palpitations in whom the possibility of a cardiac origin for symptoms exists.
 - (c) Laboratory Investigations
 - : Urine
 - A urine Labstix for all patients with suspected haematuria, proteinuria or ketonuria of any origin.
 - Urine for inspection whenever indicated e.g. jaundice, chyluria etc.
 - Urine for test where pregnancy needs to be excluded/confirmed for emergency management.
 - : Blood Sugar
 - All patients suspected of either hypo- or hyperglycaemia.
- (4) Date of last normal menstrual period for all females in reproductive age group.
- (5) Date of last anti-tetanus toxoid injection for all patients with open wounds.
- (6) History of Allergy for all patients.
- (7) Time of triage recorded.

Following these the patient's card is marked with the appropriate colour code and the patient redirected to the respective care areas.

D. Special Instructions

- (1) All triage is carried out by the Nursing Staff and/or the Medical Assistants of A&E Department under the direction of the Triage Room Doctor. Triage cards for trauma and non-trauma patients will be used to code the severity of their illness. The format of the triage cards are given in Annex D & E. Once coded, the patients will be directed to the appropriate area.

GUIDELINES FOR CRITICAL CARE PATIENTS
=====

Definition:

Critical care patients are those who are major emergencies and who require the use of a trolley as part of the clinical management of the patient:

TRAUMA

- (1) Multiple severe injuries
- (2) Burns more than 10% or on sensitive area of the body.
- (3) Inhalation injury
- (4) Fractures of lower limbs
- (5) Attempted suicides
- (6) Drug overdosage
- (7) Acute head injuries with loss of consciousness
- (8) High velocity and strong impact accidents
- (9) Fall > 2 metres
- (10) Electrocution

NON-TRAUMA

- (1) Acute severe chest pain of whatever origin
- (2) Acute breathlessness including asthma
- (3) Acute myocardial infarction
- (4) Renal colic
- (5) Severe gastroenteritis
- (6) Bleeding GIT
- (7) Acute low backache
- (8) Terminally ill patient
- (9) Acute abdomen, including acute retention of urine
- (10) Severe dizziness/syncope/fits
- (11) CVA
- (12) All patients drowsy or comatose
- (13) Patients unable to walk or in severe distress

GUIDELINES FOR INTERMEDIATE CARE PATIENTS

Definition:

Intermediate Care Patients are those who are emergency patients but do not require the use of trolley area facilities and can be managed in an ambulatory setting. These patients will generally require wheelchairs.

TRAUMA

- (1) Upper limb fractures/dislocation
- (2) Multiple superficial wounds
- (3) Burns < 10%
- (4) Joint sprains and muscular strains
- (5) Multiple bee, insect stings, and animal bites
- (6) Simple laceration
- (7) Foreign bodies of ear, nose, throat and soft tissues

NON-TRAUMA

- (1) Febrile conditions not requiring critical care attention
- (2) Mild abdominal pains
- (3) Acute large skin infections and emergencies, e.g. cellulitis, urticaria, etc.
- (4) Abscesses
- (5) Acute infection of eye and ear
- (6) Acute headaches or pains of other regions not requiring critical care

GUIDELINES FOR WALK-IN PATIENTS
=====

Definition:

Walk-in patients are non-emergency patients. A non-emergency is generally an old injury or a condition that has been present for a long time. The patient does not require immediate treatment and there is no immediate threat to patient's life or limb.

TRAUMA

- (1) Old scars
- (2) Deformities of bones, limbs or spine
- (3) Joint contractures
- (4) Old malunited fractures
- (5) Old un-united fractures
- (6) Old un-reduced fractures
- (7) Request for removal of metal plates, screws
- (8) Chronic discharging wounds
- (9) Chronic sprains

NON-TRAUMA

- (1) Cold lumps and bumps in the body
- (2) Varicose veins
- (3) Cysts
- (4) Requests for circumcision
- (5) Patching of earlobe
- (6) Removal of tattoo
- (7) Removal of corns, warts
- (8) Removal of keloids
- (9) Chronic rhinitis
- (10) Defective hearing
- (11) Nasal polyp
- (12) Wax in ears
- (13) Cataracts
- (14) Upper respiratory tract infection without fever
- (15) Chronic cough
- (16) Social problem - requests admission
- (17) Psychosomatic problems
- (18) Chronic headaches on and off
- (19) Insomnia

NONTRAUMA TRIAGE CARD

CODE Green Blue Red CPR

Resp. Rate	/min	<input type="checkbox"/> Shallow <input type="checkbox"/> Tachypnea <input type="checkbox"/> Gasping	<input type="checkbox"/> Full
Pulse Rate	/min	<input type="checkbox"/> Irregular	
B.P.	/	<input type="checkbox"/> Unmeasurable	
CCS	/15	G ₁ / 4 N ₁ =	/ 6 V ₁ / 5
Pupil Size	Rt Lt	mm mm	
Light Reflex	/		
Appearance		<input type="checkbox"/> Pale <input type="checkbox"/> Unwell <input type="checkbox"/> Cyanosis	

Chief Complaint

Plan of Management:

- 1) _____
- 2) _____
- 3) _____
- 4) _____
- 5) _____

AUMA TRIAGE CARD

CODE Green Blue Red CPR

Resp. Rate	/min	<input type="checkbox"/> Shallow <input type="checkbox"/> Tachypnea <input type="checkbox"/> Gasping	<input type="checkbox"/> Full
Pulse Rate	/min	<input type="checkbox"/> Irregular	
B.P.	/	<input type="checkbox"/> Unmeasurable	
CCS	/15	G ₁ / 4 N ₁ =	/ 6 V ₁ / 5
Pupil Size	Rt Lt	mm mm	
Light Reflex	/		
Appearance		<input type="checkbox"/> Pale <input type="checkbox"/> Unwell <input type="checkbox"/> Cyanosis	

Wound

Plan of Management:

- 1) _____
- 2) _____
- 3) _____
- 4) _____

Mechanism of Injury

RTA Pedestrian Motorcycle Fire Dive by _____
 Fall from Height Collision Fall Run over Burn _____
 Assault Self Injury Spot Other Flame Scald _____
 Other _____

Time _____ Date _____ of injury

REFERENCE 2 Personnel at ED/SGH

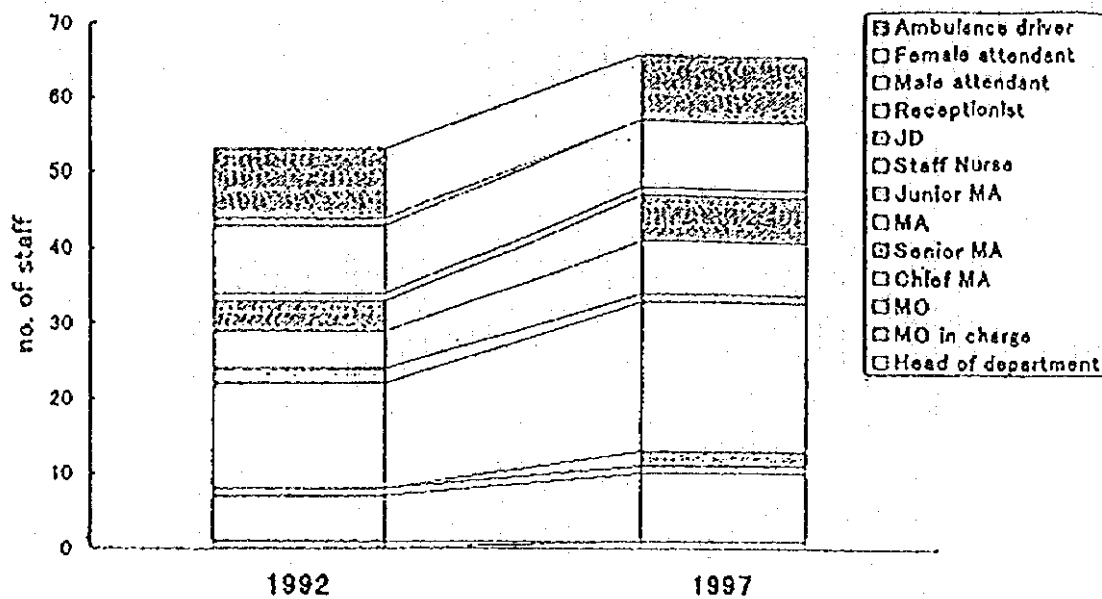
No. of staff in 1992 and 1997

	1992	1997
Head of department	0	1
MO in charge	1	0
MO	6	9
Chief MA	1	1
Senior MA	0	2
MA	14	20
Junior MA	2	1
Staff Nurse	5	7
JD	4	6
Receptionist	1	1
Male attendant	9	9
Female attendant	1	0
Ambulance driver	9	9
OH driver	?	6
Others		0
Total		53
Total (OH driver excluded)		66

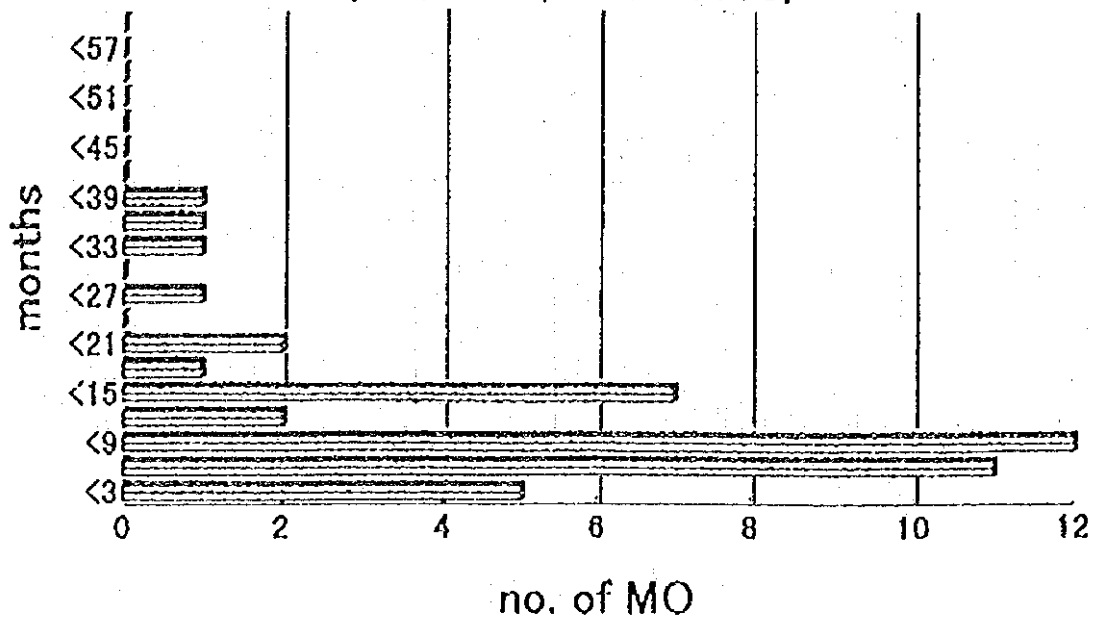
Working schedule at ED/SGH

Week days	Full day (Office hours)	Morning	Afternoon	Night
Specialist	1	2	2	1
MO	0	2	2	1
MA	2 (Senior MA)	3	4	3
Nurses	0	2	2	2
Attendant	1	2	2	1
Driver	5	2	2	2

Personnel at ED/SGH



Working period of medical officers (ED/SGH, since 1993)



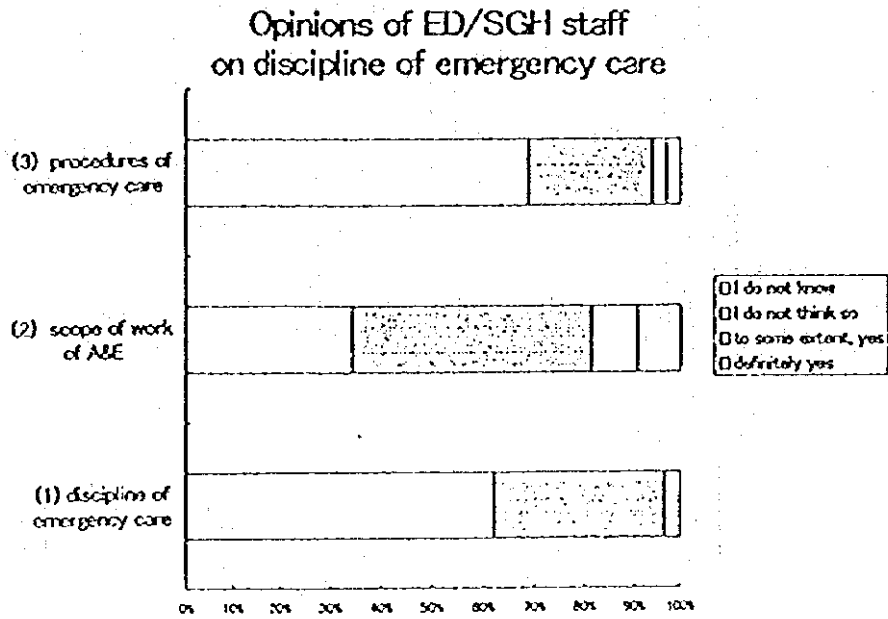
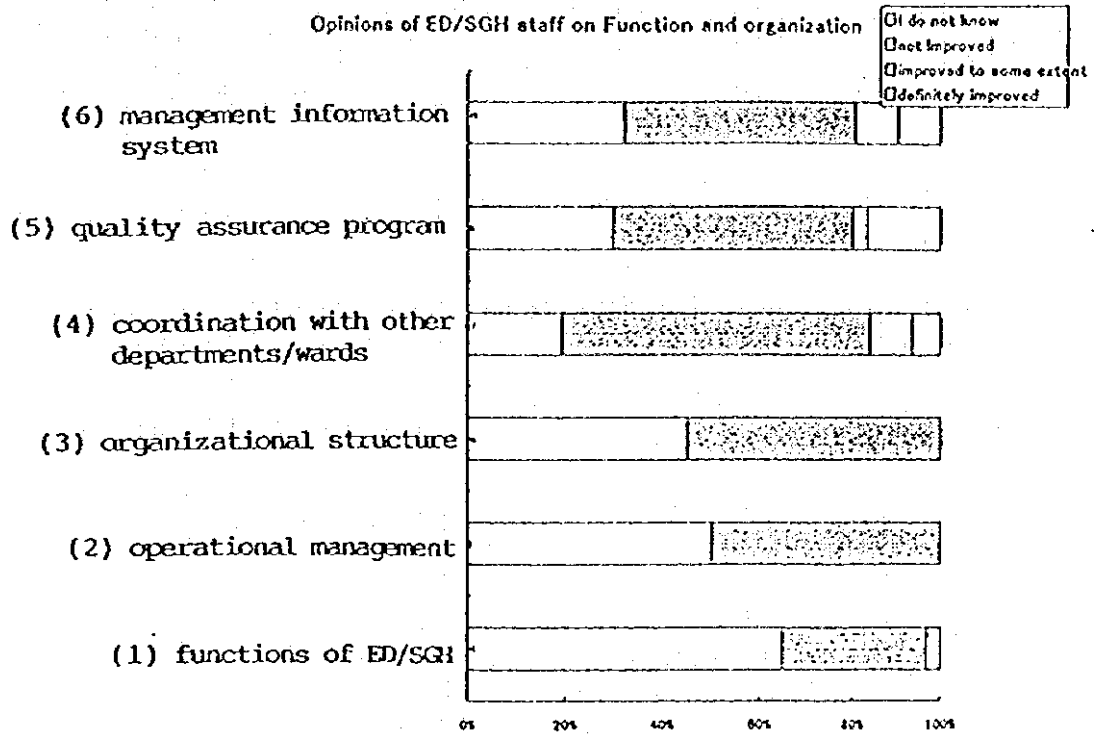
REFERENCE 3

Questionnaire survey for ED staff and ward staff in SGH

Achievement / View of A&E staff (n=32)									
Functions and organization	definitely improved	improved to some extent	not improved	I do not know	total	Total "not know"	definitely improved	total of "improved"	
(1) functions of ED/SGH	20	10	0	1	31	30	67%	100%	
(2) operational management	16	16	0	0	32	32	50%	100%	
(3) organizational structure	14	17	0	0	31	31	45%	100%	
(4) coordination with other departments/wards	8	20	3	2	31	29	21%	90%	
(5) quality assurance program	9	15	1	5	30	25	36%	98%	
(6) management information system	10	15	3	3	31	28	38%	89%	
Discipline of emergency care									
(1) discipline of emergency care was established	18	10	0	1	29	28	84%	100%	
(2) scope of work of A&E department became clear	11	15	3	3	32	29	38%	90%	
(3) procedures of emergency care was standardized	22	8	1	1	32	31	71%	97%	
Quality of Care									
(1) quality of care of medical doctors	15	18	0	1	32	31	48%	100%	
(2) quality of care of medical assistant	17	12	1	0	30	30	57%	97%	
(3) quality of care of nurses	19	12	1	0	32	32	59%	97%	
(4) quality of service of attendants	7	17	8	0	32	32	22%	75%	
(5) quality of ambulance service	25	7	0	0	32	32	78%	100%	
(6) quality of service of drivers	17	13	2	0	32	32	53%	94%	
(7) quality of resuscitation measures	24	7	0	0	31	31	77%	100%	
(8) quality of care in observation room	14	18	0	0	30	30	47%	100%	
(9) the outcome of care for critical patients	22	8	0	0	30	30	73%	100%	
(10) quick response of medical staff of the wards	7	23	0	2	32	30	23%	100%	
Quality of A&E services									
(1) waiting time of urgent patients	23	7	2	0	32	32	72%	94%	
(2) waiting time of non-urgent patients	7	14	9	2	32	30	23%	70%	
(3) attention of staff to patients was improved	19	11	1	0	31	31	61%	97%	
(4) patient satisfaction	12	14	1	3	30	27	44%	96%	
Others									
(1) workload of A&E staff reduced	2	7	19	3	31	28	7%	32%	
(2) workload of ward staff reduced	11	5	7	7	30	23	48%	70%	
(3) motivation of A&E staff improved	13	13	4	0	30	30	43%	87%	

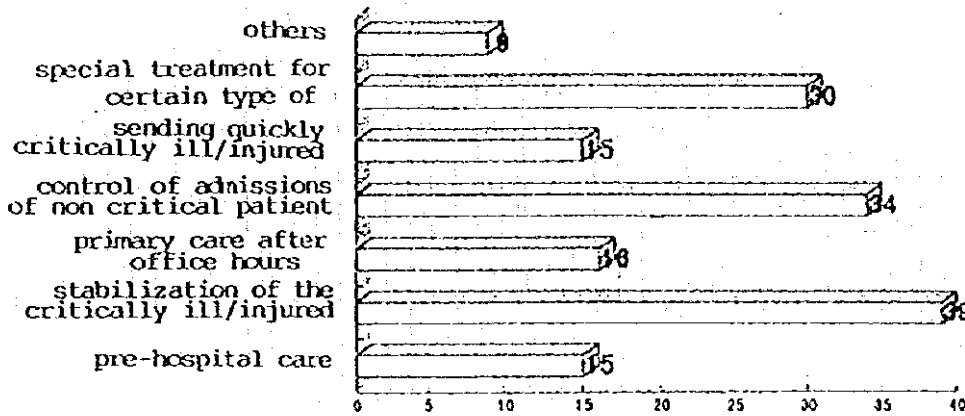
(4) preparedness for disaster improved	15	14	2	0	31	31	48%	94%
(5) patient knowledge improved	3	11	14	3	31	28	11%	50%
(6) publicity of E/D service improved	4	19	8	2	31	29	14%	79%
Operational Policy	Followed appropriately	Not followed appropriately	not know			positiv		
triage system	24	7	0		32	31	77%	
job duties which are written in "desk file"	20	7	3		30	27	74%	
recording and reporting	20	10	2		32	30	87%	
admission policy to wards	22	7	2		31	29	78%	
standing orders for X-ray	18	11	2		31	29	62%	
trauma team policy	16	11	4		31	27	59%	
Utility of training course	Very often	Sometimes	Seldom	Never				
putting into practice	27	5	0					
	84%	16%						
Satisfaction	Satisfied	Acceptable	Unsatisfied					
Are you satisfied with your work?	20	12	0					
	Yes	No						
Are you proud to serve at ED/SGH?	30	1						

REFERENCE 3. Questionnaire survey for ED staff and ward staff

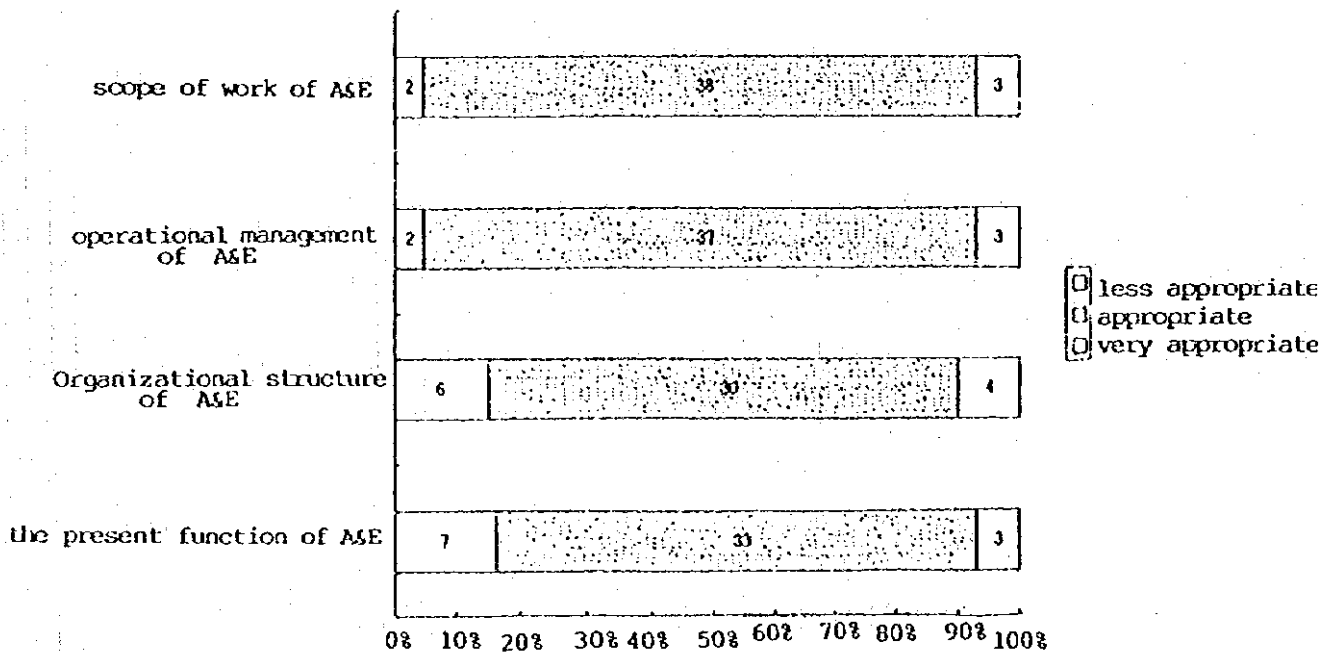


REFERENCE 3 Questionnaire survey for ED staff and ward staff

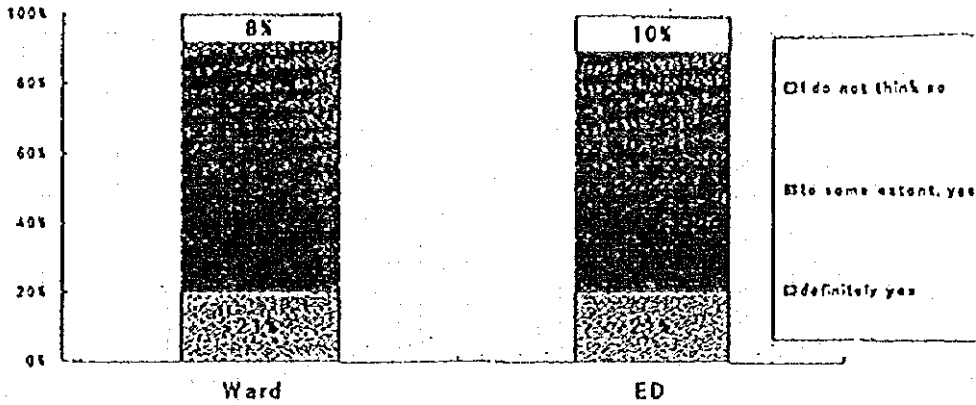
Expectation of wards for ED/SGH
(n=41)



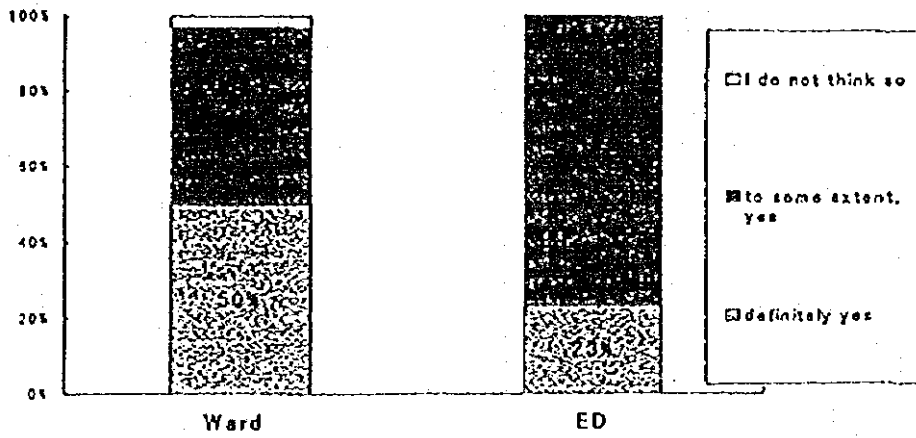
Opinion of wards regarding appropriateness



**Coordination between ED and wards
was improved?**
(Questionnaire to staff of ED & wards, 1997)



Improvement of response of ward staff
(Questionnaire to staff of ED & wards, 1997)



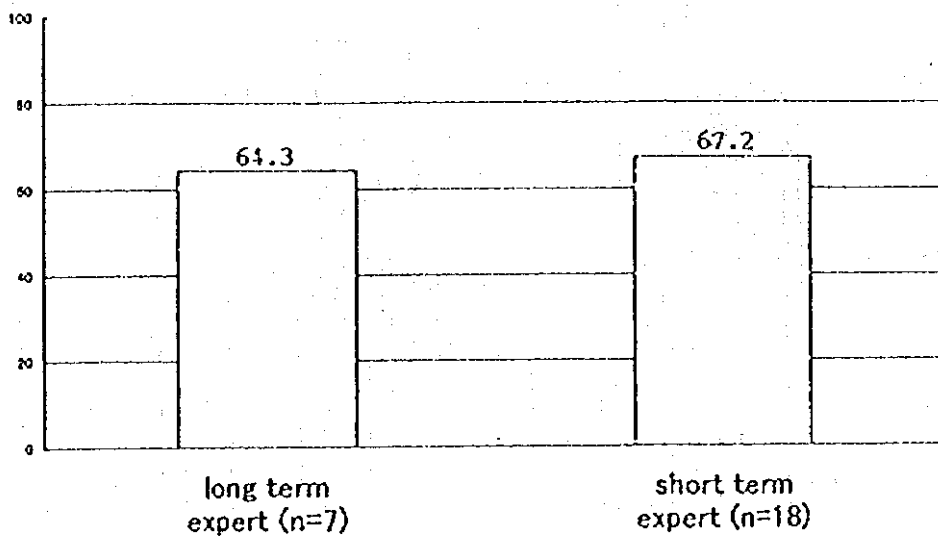
REFERENCE 4

Questionnaire survey for JICA experts

Questionnaire to 25 JICA experts

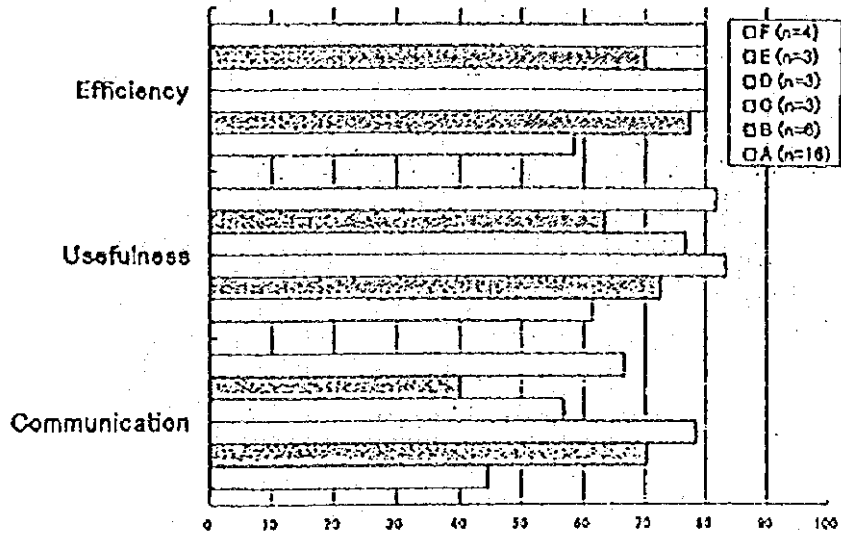
Achievement of task goal	%	no.	
long term expert (n=7)	64.3	7	
short term expert (n=18)	67.2	18	
Length of dispatch	too short	appropriate	too long
long term expert (n=7)	4	3	0
short term expert (n=17)	6	11	0

Achievement of task goals
(perception of JICA experts)

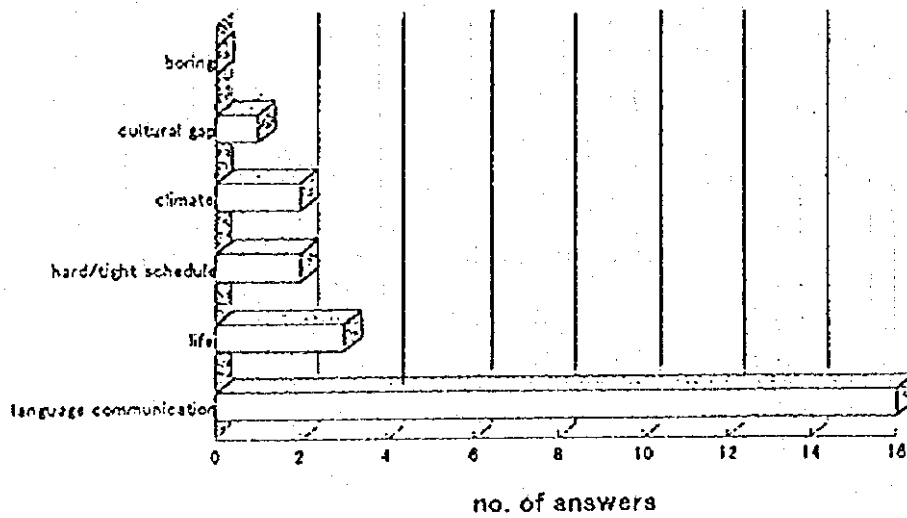


REFERENCE 5 Questionnaire survey on overseas C/P training

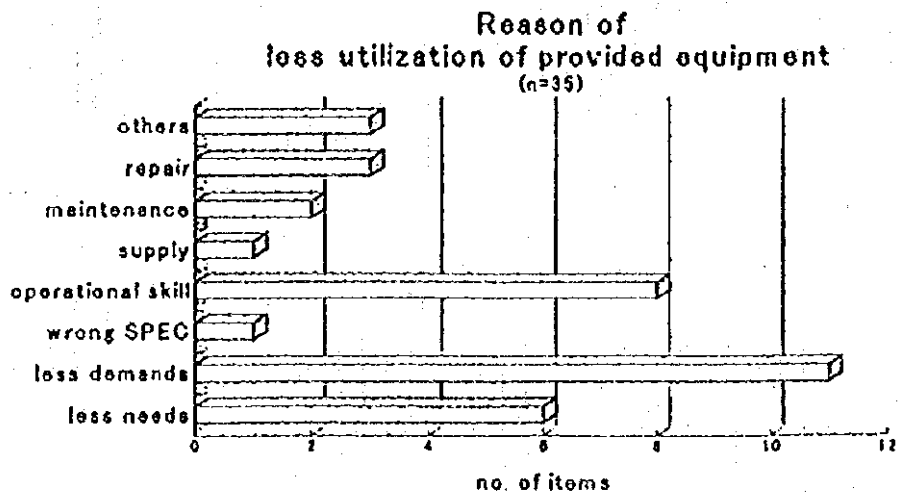
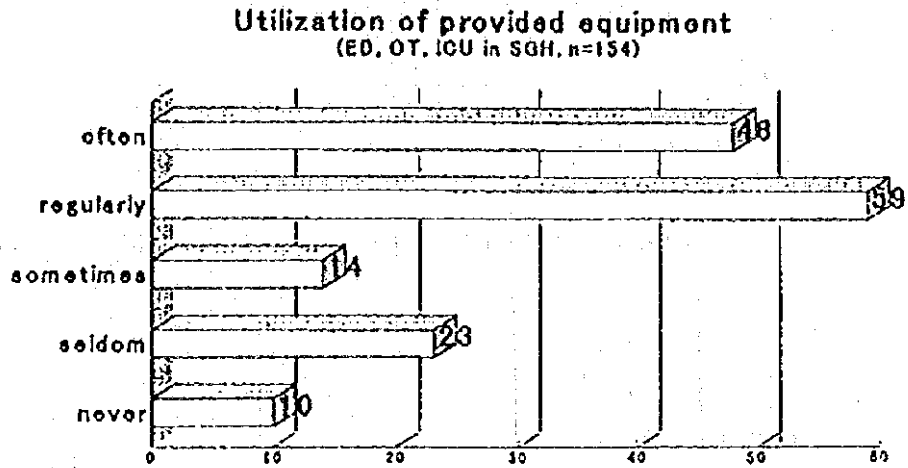
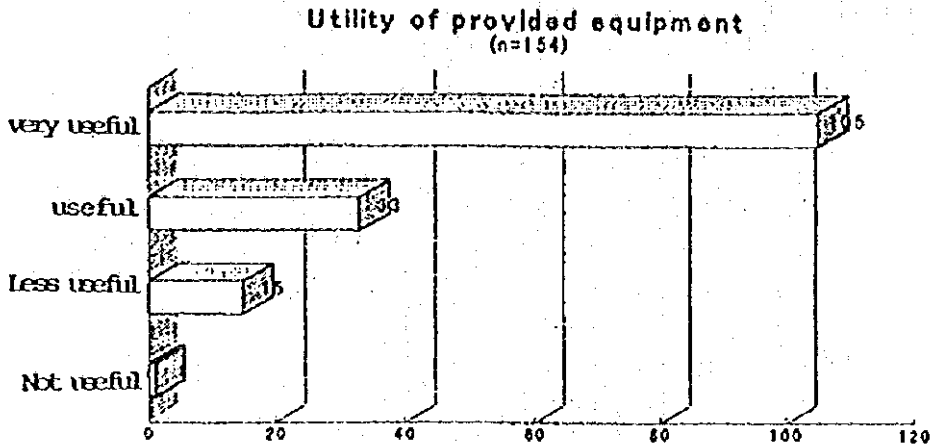
C/P training in Japan: perception of participants
(rating by % against expectations, 35 visits)



Problems encountered by C/P to Japan (n=20)



REFERENCE 6 Survey on utilization of provided equipment

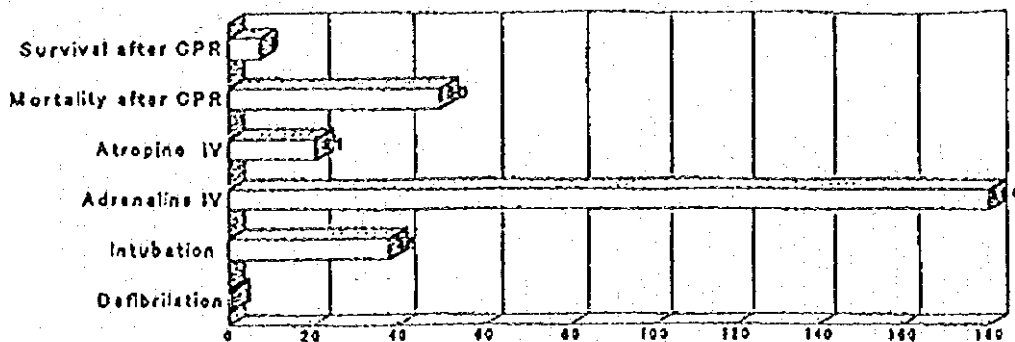


Reference 6 Survey on utilization of provided equipment

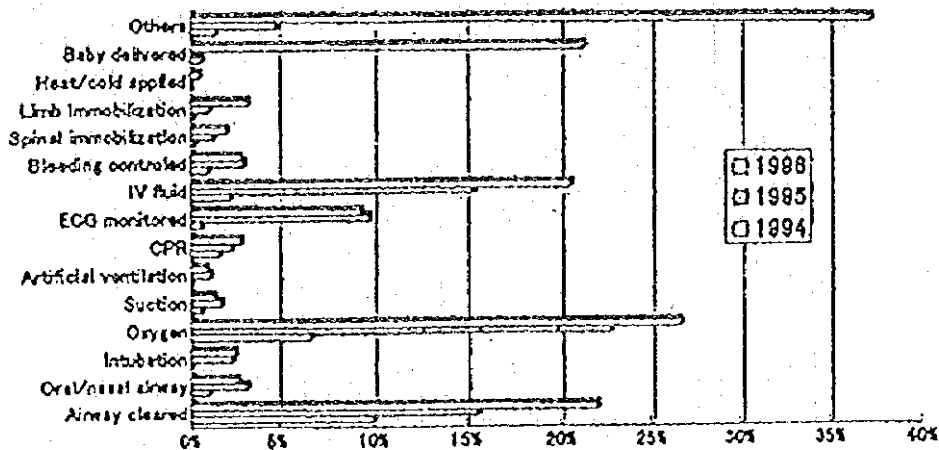
Type of equipment	Model	Install	Yr. spent	out/or der	survey1	survey2	survey3	survey4	survey5
Centrifuge	Clay Adams	AE	4	N	never	unknown	seldom	never	unknown
Tracheostomy		AE	4	N	never	seldom	seldom	never	unknown
Anaesthetic machine	Blease Frontline 560	OT/AE	4	N	never	never	never	unknown	unknown
Portable screen shield	2.0 mmPb	AE	3	N	never	often	often	often	often
Co2 Monitor	Engstrom Ehza	AE	2	N	never	never	never	unknown	often
Intubating laryngoscope	Bullard, LAR-A	AE	2	N	never	often	often	often	often
Portable phone (In ambulance)	Motorola 8800N	AE	4	N	never	som	often	often	often
HeartStart 3000 Auto Defibrillator	Laerdal (with quick reporter)	AE	4	N	never	often	often	regularly	sometimes
Anaesthetic Machine	Blease Frontline 560	AE	4	N	never	never	never	unknown	unknown
Adult Ventilator	Companion 2801	AE	0	N	never	regularly	often	regularly	sometimes
Fibrescope-Bronchoscope	Olympus GF-20	AE	4	N	seldom	seldom	seldom	regularly	unknown
Specular, Meatel	Tumarkin	AE	4	N	seldom	seldom	unknown	never	often
Ophthalmoscope (Indret)	Neitz 10-alpha	AE	4	N	seldom	seldom	seldom	regularly	often
3 mirror contact lens	Haag Streit	AE	4	N	seldom	seldom	seldom	never	unknown
Pandendoscope	Rodenstock	AE	4	N	seldom	seldom	unknown	unknown	unknown
Aspherical Lens		AE	4	N	seldom	seldom	seldom	unknown	unknown
Head Mirror	Kings College	AE	4	N	seldom	seldom	seldom	unknown	seldom
Head light		AE	4	N	seldom	seldom	seldom	seldom	seldom
Otoscope set	Welch-Allyn	AE	4	N	seldom	seldom	seldom	unknown	often
Ear Speculum	Setafix	AE	4	N	seldom	unknown	seldom	regularly	often
Hemoglobinometer	Mallinkrodt	AE	3	N	seldom	sometimes	regularly	sometimes	often
Lecture scope camera	Olympus LS10, SC35	AE	4	N	seldom	sometimes	regularly	regularly	unknown
Multipurpose OT	Muranaka	OT	4	N	seldom	seldom	seldom	unknown	unknown
Mobile C-Arm	Toshiba, SXT-600A	AE	4	N	seldom	seldom	never	never	unknown
Oesophagoscope	Hopkins	OT	4	N	seldom	often	regularly	unknown	never
Examination lamp Halogen	Welch-Allyn	AE	4	N	seldom	sometimes	seldom	unknown	unknown
Bipolar Electr.Coagulator	Mizuho	OT/AE	4	N	seldom	seldom	unknown	unknown	unknown
Ophthalmoscope	Neitz 10-alpha13	AE	4	N	seldom	often	regularly	regularly	often
Nebulizer	Pari	AE	4	Y	seldom	regularly	often	often	often
Nebulizer	Pari	AE	4	Y	seldom	regularly	often	often	often
Cardiac Monitor	Datex, CH-2	AE	4	Y	seldom	sometimes	often	often	often
Transducer for pulse oximeter	Pace Tech4	AE	3	N	seldom	sometimes	often	regularly	often
Cardiac Monitor	Datex, CH-2	AE	4	N	seldom	sometimes	often	often	often

REFERENCE 7: Profile of pre-hospital care and ambulance service of ED/SGH

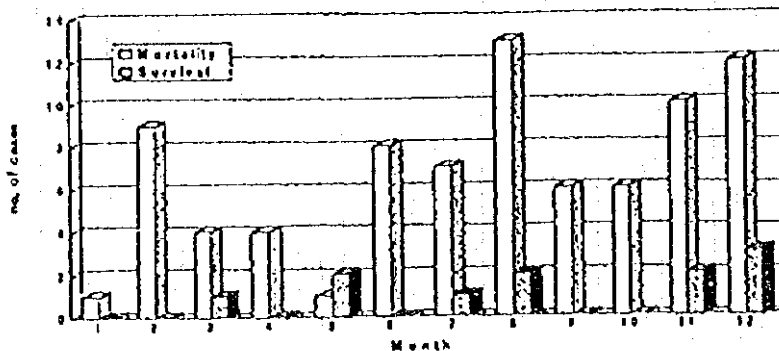
Resuscitation measures done by EMT
(Emergency runs in 1988, n=778)



Treatment given by EMT team
(1994-1996)



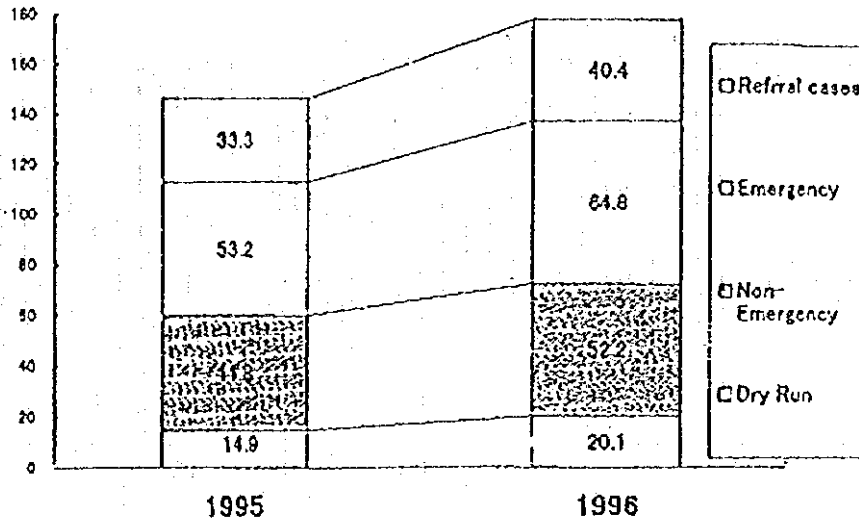
No. of Mortality & No. of Successful Resuscitation
(1996)



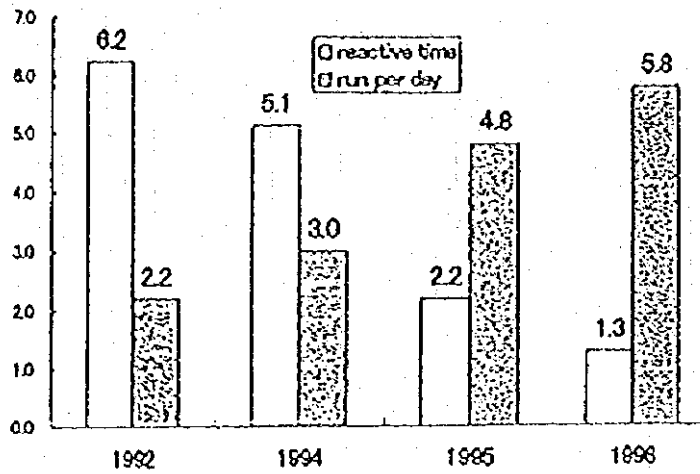
REFERENCE 7

Profile of pre-hospital care and ambulance service of ED/SGH

Monthly average of ambulance run by type



Trend of daily runs and reactive time
(run per day = times, reactive time = minutes)



REFERENCE 8

Analysis of the results of the survey on patient satisfaction done by ITM, 1995/1997

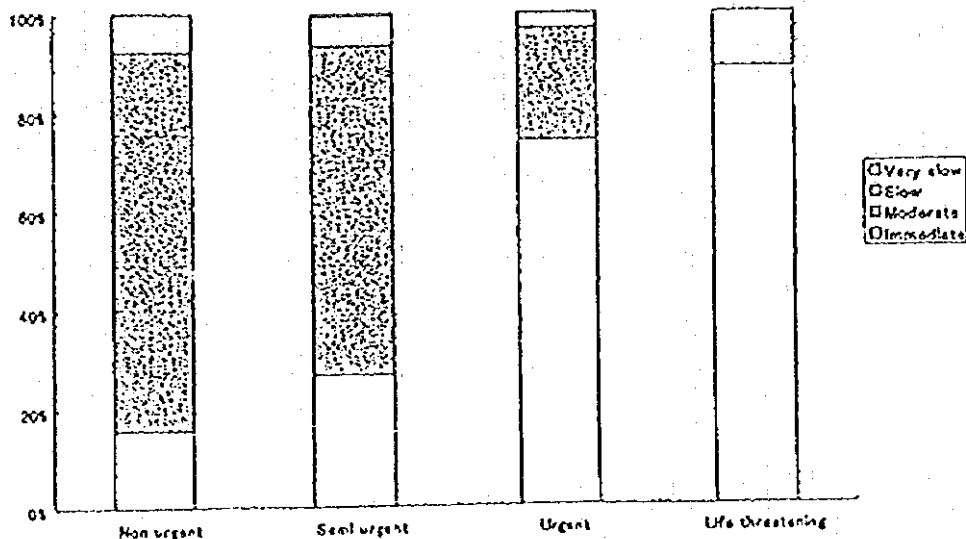
Satisfaction of attendance at ED/SGH by triage category (ITM, 1997, n=1,000)

Attention against triage	Non urgent	Semi urgent	Urgent	Life threatening
Immediate	73	99	121	8
Moderate	355	243	37	0
Slow	35	22	5	1
Very slow	0	2	0	0
Total	463	365	163	9
Examination by MO against triage	Non urgent	Semi urgent	Urgent	Life threatening
Good	227	234	140	9
Average	229	129	22	0
Poor	7	2	1	0
Total	463	365	163	9
Examination by MA against triage	Non urgent	Semi urgent	Urgent	Life threatening
Good	216	223	135	9
Average	246	140	28	0
Poor	1	2	0	0
Total	463	365	163	9

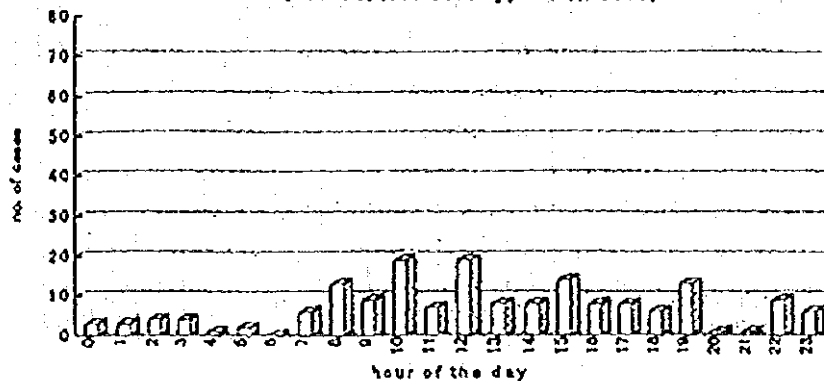
Waiting time (arrival to examination)

Attendance (total)	< 45 min	81.9%
Attendance (urgent + life-threatening)	< 45 min	85.3%

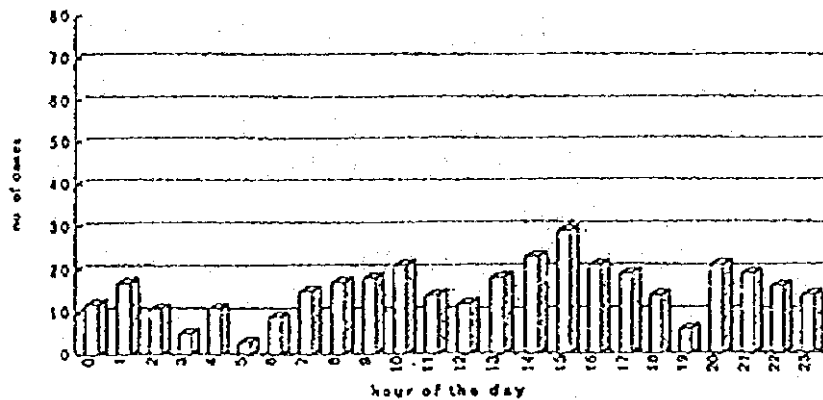
Satisfaction about quickness of attention (Satisfaction survey, 1997, n=1,000)



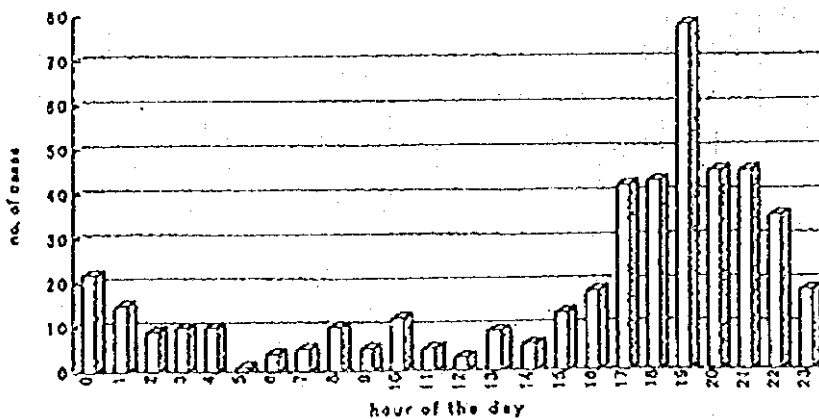
Visiting hour at ED/SGH:
 urgent/critical cases
 (source: ITM survey, March 1997)



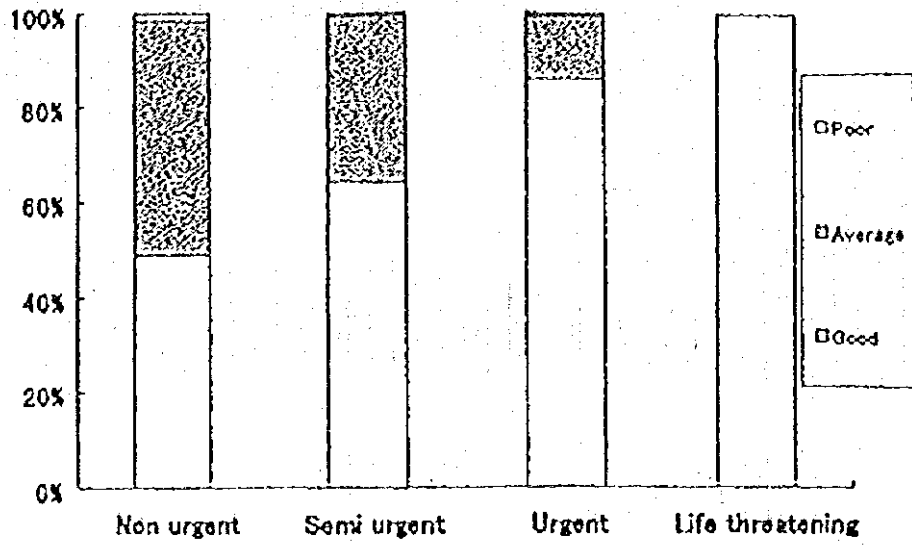
Semi-urgent cases



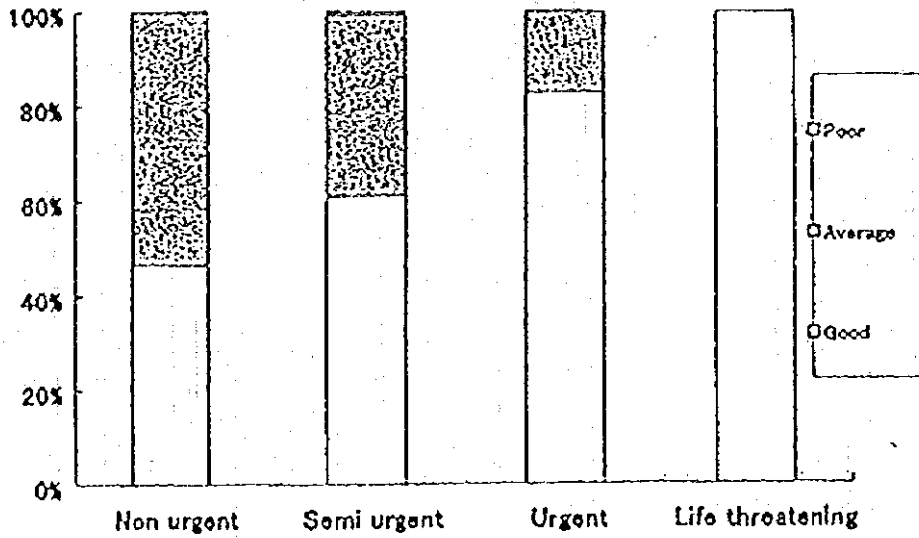
Non-urgent cases



Satisfaction of attendance about examination by doctors
(ED/SGH, 1997, n=1,000)



Satisfaction about examination by MA
(ED/SGH, 1997, n=1,000)



APPROPRIATENESS

JICA AND UPGRADING OF ACCIDENT AND EMERGENCY CARE SERVICE IN SARAWAK - 1/8/1992 - 31/9/1997.

Dr. Ernest Yeoh

JICA is responsible for the technical cooperation aspect of Japan's Overseas Development Assistance (ODA), which was started in 1954 when it joined the Colombo Plan set up in 1950 to assist Asian countries in their socio-economic development.

This Technical cooperation includes:-

1. Training in Japan.
2. Despatch of Experts.
3. Provision of Equipment.
4. Project Type Technical Cooperation.
5. Development Study.

TRAINING OF FUTURE LEADERS.

Technical Training Programmes.

There are 2 types of JICA training programmes.

- 1) Conducted in Japan.
- 2) Third country training held in host countries other than Japan.

Besides "cultural shock," those courses conducted in Japan, communication seems to be a barrier to more effective transfer of knowledge and technology. Here again, other factors play a part for example-

- level of knowledge, expertise
- length of course.
- mindsets of host and guest.

A feedback should be sought on the contents of such courses such that one day the 'virtual' course can be mapped out.

Where third country training courses are concerned, participants from the host country and neighbouring countries can study in a climate and socio-economic environment similar to their own and are able to acquire appropriate technologies that are easy to apply to their own countries. They must be able to "extrapolate" and use what they need and not to accept a "transplant."

TRANSFER OF TECHNOLOGY

Despatch of Experts.

The objective of the Expert Despatch Programme is to transfer and disseminate technical knowledge and skills most suited to the needs of developing countries.

There are 2 types of experts:-

- 1) Individual Experts.
- 2) Project Experts.

These experts are recruited on a contract basis.

I think bringing short term experts for only 7 - 10 days is not cost-productive. No sooner than they settle down what with the heat and the food, they will find themselves packing up to go home!

I presume they came over to run a Seminar, Workshop or participate in a Conference. They would have or should have left behind any material by way of notes and slides. These could be compiled later.

I am made to believe that recruitment of experts is problematic, for example language, expertise, willingness, mindset and motivation. I realise it difficult but I wonder if it is prudent to select all the members of the staff in one "post" from the same locality and institution rather than from throughout Japan.

As for the long term experts their job security must be guaranteed. For example that they have a job to go back to.

PROVISION OF EQUIPMENT.

Equipment is provided to facilitate technology transfer from Japan usually in conjunction with existing cooperation programmes. In this area, I am sure much thought had been put into the purchase of medical equipment in the Emergency Department of the Sarawak General Hospital.

I must say that the Department is now well equipped, better than most other Hospitals. However, there might have been an oversight on some expensive equipment purchased that were not used subsequent to the departure of the Japanese expert (s).

One also notices the purchase of 'subspeciality' equipment. I also notice that much of the equipment is from Japan, for good reason, but one worries about the maintenance and backup services. Also most of the emergency Department staff would be more familiar with other more commonly used models.

I feel in the end, much equipment has been provided for by JICA but one must not run away from the fact that one should enquire what is needed and not give what one wants to give before the ultimate purchase.

TRAINING

JICA has spent much in the training of doctors, paramedics, nurses and allied personnel at different levels and in various aspects including seminars and workshops.

The work done is laudable. Much material has been produced and purchased. Lecture notes of speakers should be collected, stored and compiled.

Where able, could be published in some booklet forms; slides ought to be kept out in carousels and sealed so that any individual could use the carousels for self education. All the educational material could be shared with other JICA centres, for example, Surabaya, Indonesia.

ACTIVITIES

PRE-HOSPITAL CARE

A programme has been evolved and is currently in practice of the pre-hospital aspect of patient care with the training of the paramedics providing care in the ambulance service.

A videotape of the "system" was made and has been viewed. What you have in your place is much better than what is available in Peninsular Malaysia. There may only be some minor corrections to be made.

DISASTER MANAGEMENT

As everyone is appreciative of that communication is a major problem between and with the rescue agencies, Polis, Fire Brigade and medical services, it was very opportune and appropriate that it was ironed out at the National Conference on Disaster management held recently in 1996 together with subsequent followup meetings.

As for equipment to be used in disaster, a list of equipment kept in various boxes should be made out and this entire set of equipment be made available in Sibul, Miri, etc, such that a doctor paramedic from Kuching would be familiar with the contents.

Other minor points are:-

- hands free radiosets
- head lamps
- waist pouches (for DDA drugs)
- boots
- luminous waist coats for identification.

EMERGENCY MEDICINE DEPARTMENT

Policies of the Ministry of Health are being carried out.

There are no real problems in this area as evidenced by the retrospective review of the case notes of patients presenting with the Acute Head Injury and upper gastro-intestinal haemorrhage. A few parameters were looked and the performance in the Emergency Department was of a high standard.

The use of scoring systems, example GCS was commendable. Time spent in the Emergency Department was minimised as well.

A revamp of sorts of the 'notes' currently in use perhaps might be useful. There probably is too much incorporated in them.

The lack of medical officers in the Emergency Department is probably understandable. What with the Medical Assistants performing most of their tasks, but more medical officers would be ideal.

I feel that the 'sense of urgency' may be lacking - and some change of 'mindset' may be required.

Certain things must be institutionalised, example transfer of patient from car to trolley to be effected by the use of a scoop stretcher. All this has to be 'hands-on-teaching,' a gentle reminder here and there by a senior staff member.

SUMMARY

In my opinion, JICA has done a very comprehensive upgrading of the Accident & Emergency services in the Sarawak General Hospital, Kuching as well as in the other Hospitals in Sarawak, like Sibul, Miri.

As in any organisation, human resources is the most important. This can be looked at closer and am sure improvements can be made. One appreciates that is one's 'mindset' that is all important and to make a change, it would not only be difficult but will take a long time.

'Materials' and 'machinery' have been sufficient both for patient care and training.

Finally as the project comes to a close, I feel that a follow-up study be mounted subsequently.

The seed has been sown, roots have grown and it would be nice to see fruits borne and flowers bloom.

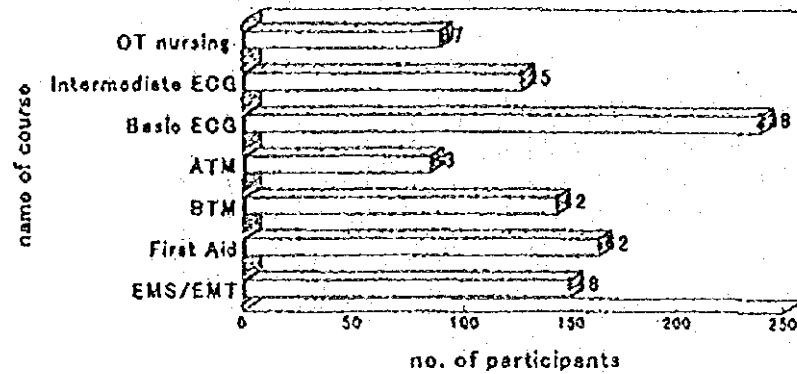
This project could also be used as the foundation of similar projects elsewhere as in Surabaya, Indonesia.

Also it could also be used as a 'training centre' for Japanese staff waiting to be sent overseas.

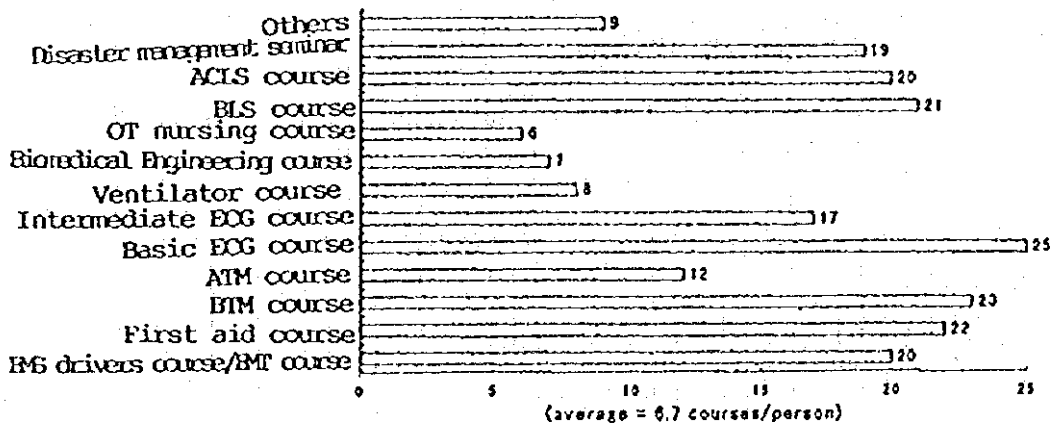
It would be nice for you also to be able to give your input into the design (and running) of the new Emergency Department.

REFERENCE 10 Questionnaire survey on human resource development on A&E in Sarawak

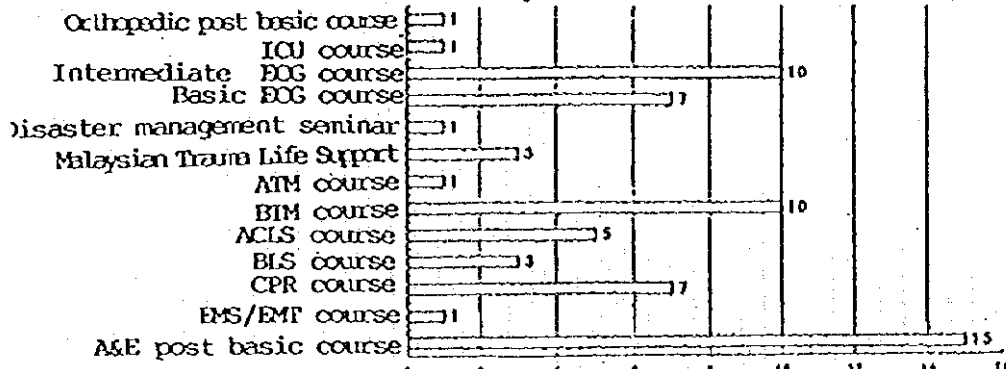
Participants in A&E courses implemented in the project



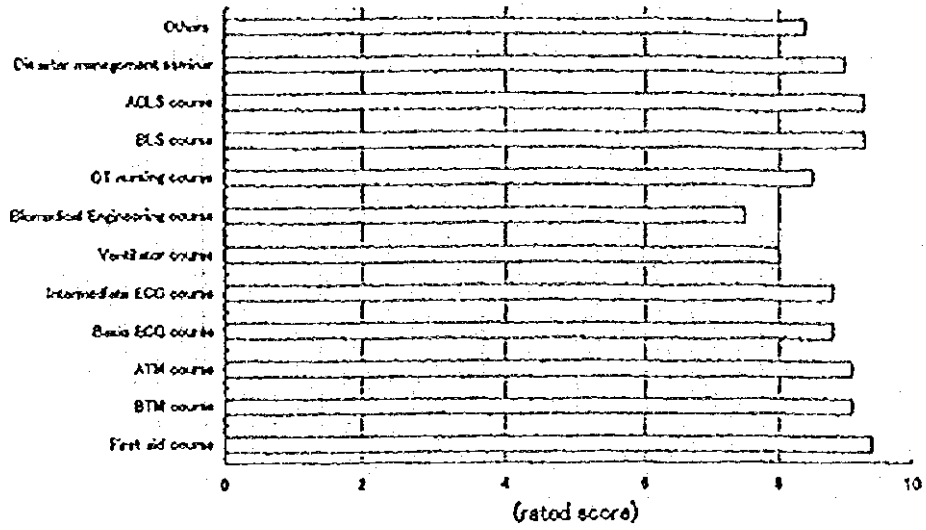
No. of course participants: ED/SGH staff (Questionnaire survey, n=31)



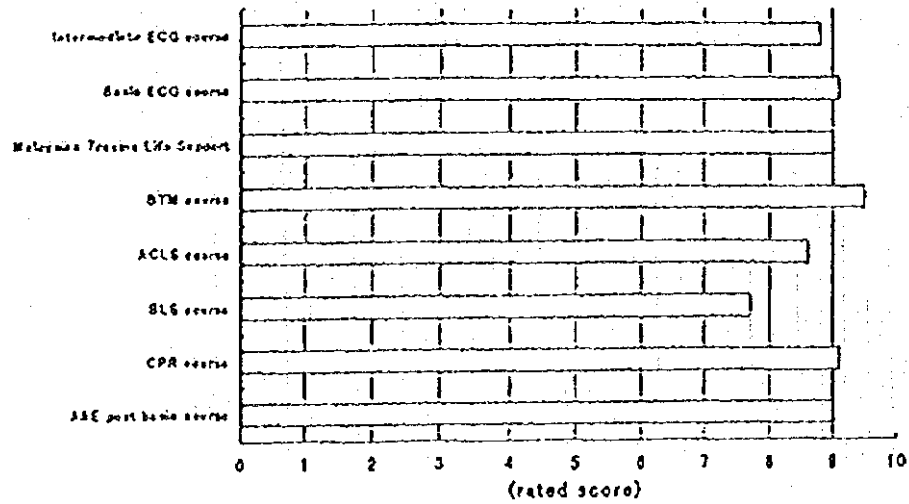
No. of staff who have participated in training courses on A&E: Div./Dist.Hospital



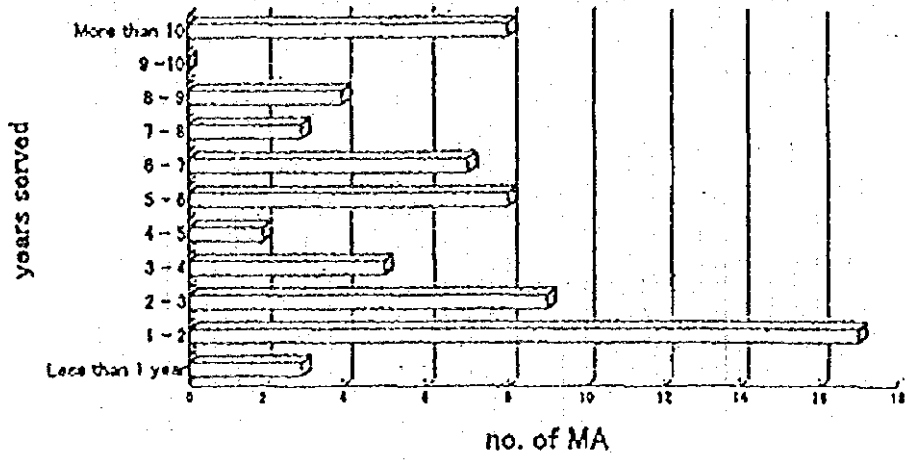
**Rating on usefulness of course
by participants from ED/SGH**



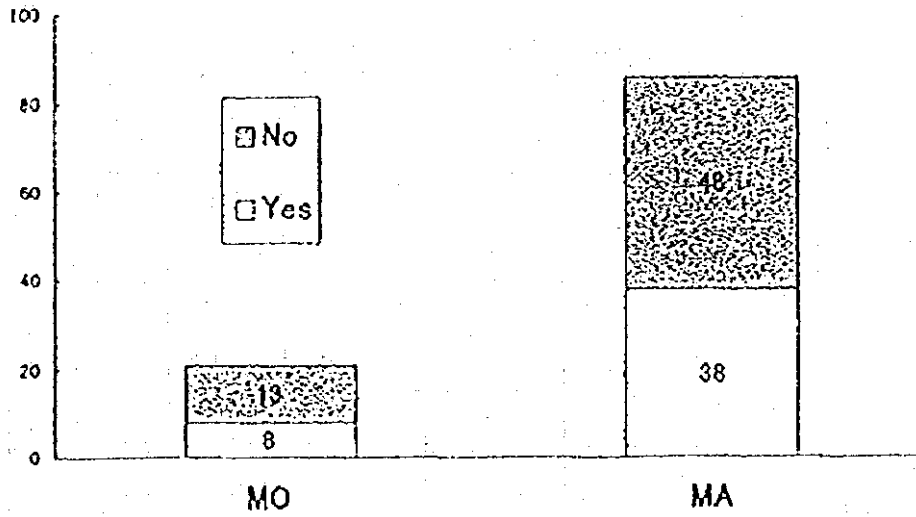
**Rating on usefulness of courses
by participants from district/divisional hospital**



Years served by MA at ED/EU
in District/Divisional Hospital



Participants of courses on A&E
(since 1983, District/Divisional Hospital)



REFERENCE 11

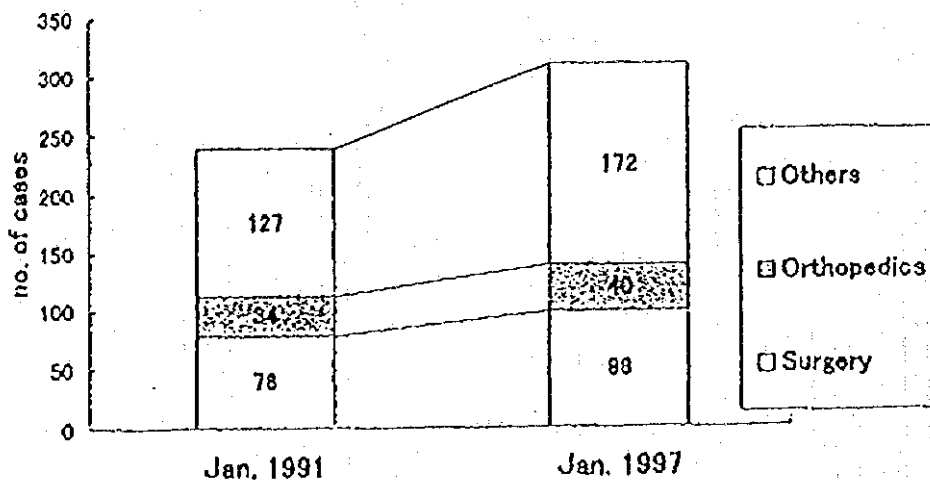
BID/DIC, Mortality in ICU and emergency surgery in OT

Trend of no. of attendance at ED/SGH

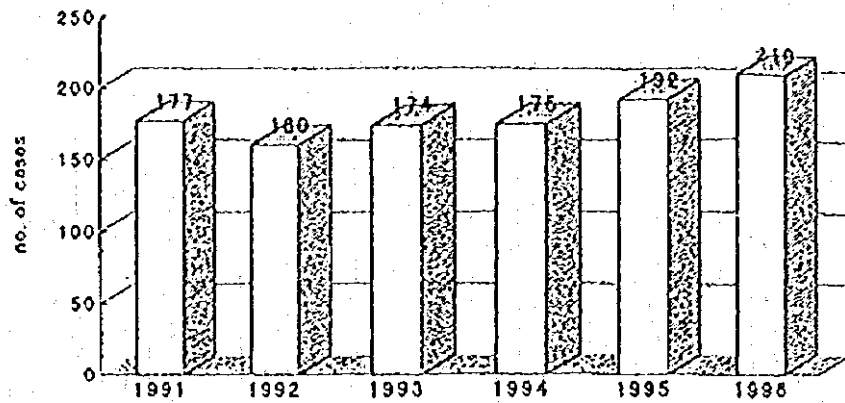
Year	1991	1992	1993	1994	1995	1996	Increase (1991-1996)
No. of attendances (total)	43878	41386	39948	44837	50721	59383	135%
No. of new attendances	42987	40482	39388	42372	47579	58432	131%
No. of repeated attendances	891	904	558	2275	3142	2931	328%
No. of BID+DIC	177	160	174	175	192*	210*	119%
No. of medicolegal cases	2938	3158	3388	3128	4042	4972	169%
No. of SOCSO cases	620	712	761	557	663	772	125%

(* by estimation)

No. of emergency surgeries at OT/SGH
(Monthly total, in Jan. 91 & Jan. 97)

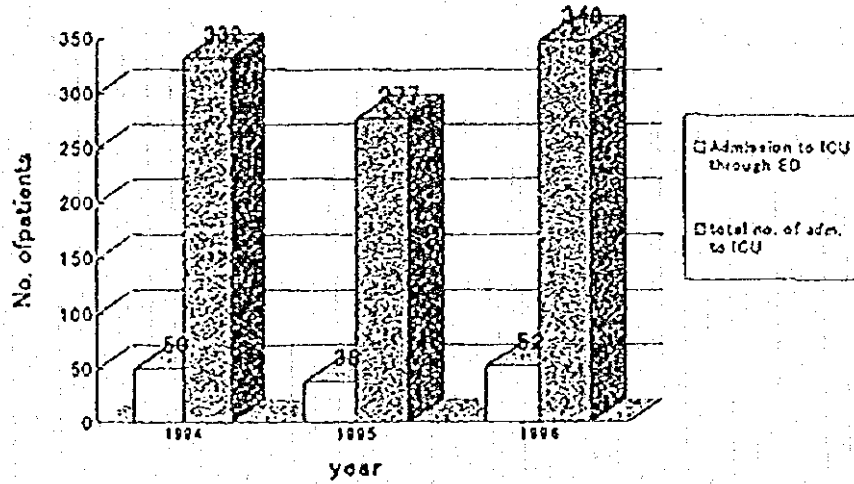


Trend of BID & DIO at ED/SGH

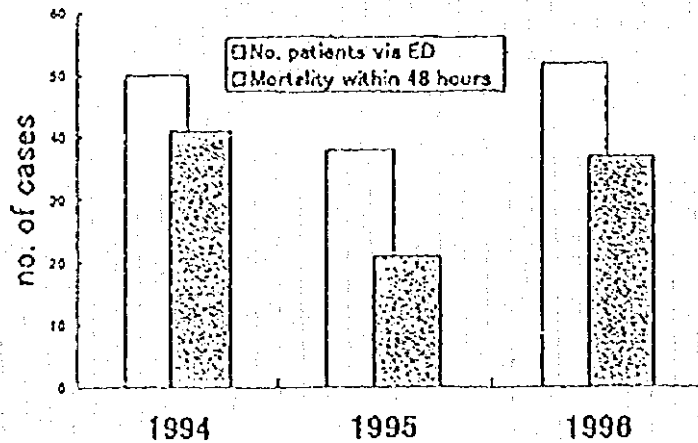


Admission to ICU through ED/SGH

(by Dr. Wong)

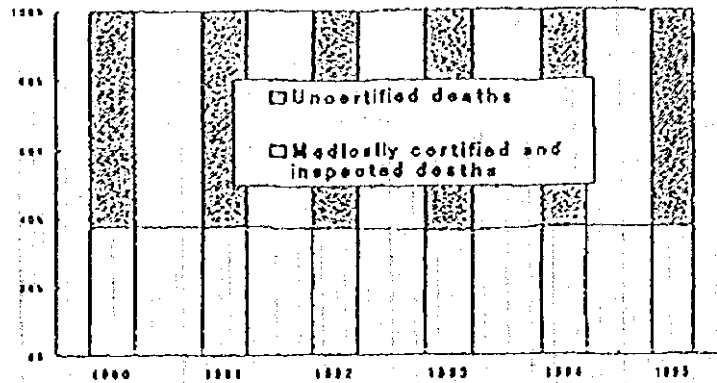


Mortality within 48 hours
(admission directly through ED/SGH)

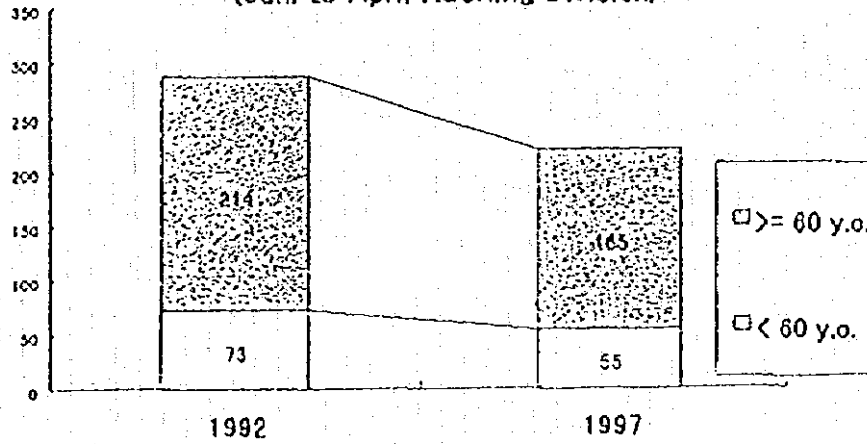


REFERENCE 12 Sample survey

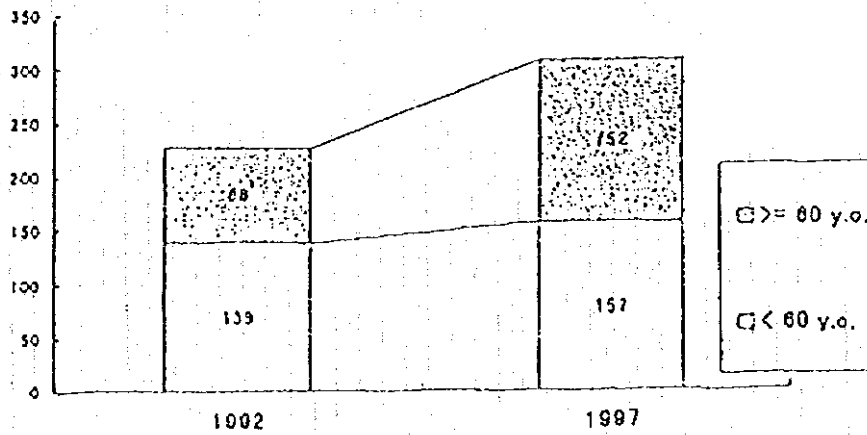
Medical certified and uncertified deaths in Sarawak (Dept. Statistics)



Death out of Hospital (Jan. to Apr., Kuching Division)



Death in Hospital (Jan. - Apr., Kuching Division)



TRANSLATION

From : Ministry of Health (Planning & Development Section)

To : JICA Malaysia Office

Date : July 8, 1997

Ref : (17)d/m.KKM-65/15/1/1/5 Vol.4

To:

1. Director-General of EPU
(Attn : Mrs. Suraya Woon Abdullah
Director of External Assistance Section)
2. Director-General of EPU
(Attn : Director of Social Service Section)
3. Japan International Cooperation Agency (JICA)
4. Director of Medical Development Div., MOH
5. Director
Kuala Lumpur Hospital
6. Director of Medical Practices Div., MOH
7. Secretary
Manpower Planning & Training Division
Ministry of Health
8. Prof. Madya Dr. Ernest Yeoh
Surgery Department
University of Malaya
9. Director of Health of Sarawak State
10. Director of Kuching Hospital
Sarawak
11. Principal Assistant Secretary
International Unit, MOH
12. Head of Emergency Department
KL Hospital

13. Head of Emergency Department
Kuching Hospital, Sarawak
14. Head of Department of General Surgery
Kuching Hospital Sarawak
15. Head of Department on General Surgery
Tengku Ampuan Rahimah Hospital, Klang
16. Chief Matron
Nursing Board of MOH
17. Principal Medical Assistant
Board of Medical Assistants
Medical Practitioner Section
MOH

Dear Sir/Madam,

**Re : Memorandum for Closing Ceremony and Signing Minutes of Discussion
Between the Japanese Evaluation Team and Ministry of Health Malaysia
on Technical Project on Upgrading of Emergency Care Services in
Sarawak**

I have the honour to refer to the above mentioned ceremony which was held on 28.06.1997.

2. Attached herewith are the ceremony's memorandum for reference and for your further action.

Thank you.

Signed,
Dr. Shahidah Abdul Manaff
Planning and Development Division
for Secretary-General
Ministry of Health, Malaysia

Internal Circular:-

- | | |
|--|--|
| 1. Secretary-General
Ministry of Health, Malaysia | 2. Director General of Health
Ministry of Health |
| 3. Deputy Director General (P)
Ministry of Health | 5. Dr. Rosnah Hadis
Planning & Devt. Division |
| 4. Deputy Director General (P)
(Research and Technical Support)
Ministry of Health | 7. All Heads of Units
Planning & Devt. Division |
| 6. Dr. Peter Low
Planning and Development Division | 8. Dr. Rohaizat Bin Yon
Planning & Devt. Division |
| 9. Dr. Fazilah Shaik Allaudin
Planning and Development Division | |
| 10. Dr. Juhaida Daud
Planning and Development Division | |
| 11. Dr. Noorliza Mohd. Noordin
Planning and Development Division | |

Memorandum for Closing Ceremony and Signing Minutes of Meetings Between the Japanese Evaluation Team and Planning & Development Division, Min. of Health on Technical Project on Upgrading of Emergency Care Services in Sarawak

Date : 28.6.97
Time : 7.45 am - 10.00 am
Place : Meeting Room 1
Min. of Health, 1st Fl, Block C
Jalan Cenderasari, KL

Attendance:

1. Dato' Dr. Megat Burhainuddin bin Megat Abdul Rahman - Chairman
Deputy Director-General of Health (Medical)
2. Dr. Shahidah Abdul Manaff
Director of Planning and Development
3. Mr. K. Kananatu
Principal Assistant General of Social Service Section (EPU)
4. Prof. Dr. Kazuo Takeuchi
President of Kyorin University, Japan

- | | | | |
|-----|--|-----|---|
| 5. | Prof. Dr. Kazuhiko Maekawa
Proffesor, University of Tokyo, Japan | 20. | Dr. Liding Jonyian
Director of Sarawak General Hospital |
| 6. | Dr. Hirofumi Kurugi
Expert in Orthopaedic
Fuji Yoshida Municipal Hospital
Japan | 21. | Dr. Abu Hassan Asari
Head of Emergency Department
Kuala Lumpur Hospital |
| 7. | Mr. Akio Takao
Expert in Ambulance Services
Fire & Disaster Management Agency
Japan | 22. | Dr. Ismail Ahmad
Head of General Surgery Dept.
Tengku Ampuan
Rahimah Hospital, Klang |
| 8. | Ms. Saeda Makimoto
JICA HQ Officer | 23. | Dr. Sabariah Faizah Jamaludin
Representative for Director
Kuala Lumpur Hospital |
| 9. | Mr. Masato Yoneda
Second Secretary, Embassy of Japan | 24. | Dr. Peter Low
Principal Assistant Director
Planning and Devt Div. |
| 10. | Mr. Yoshikazu Yamada
JICA Officer, Malaysia | | |
| 11. | Dr. Yuji Aso
JICA Neurosurgeon Expert
Sarawak | 25. | Dr. Lee Khoon Siew
Senior Medical Officer, JKN S'wak |
| 12. | Mr. Matsumasa Arima
JICA Coordinator, Sarawak | 26. | Ms. Beck Kim Siok
Representatiive for SUB Manpower
Planning & Training |
| 13. | Mr. Takashi Watanabe
JICA Expert in Medical Emergency
Technic | 27. | Dr. Rohaizat bin Yon
Principal Assistant Director
Planning & Development Div. |
| 14. | Cik Teruyo Takahashi
JICA Emergency Nursing Expert, S'wak | 28. | Dr. Juhaida Daud
Assistant Director
Planning & Development Div. |
| 15. | Ms. Akiko Inagaki
JICA Officer, Malaysia | 29. | Dr. Fazilah Shaik Alauddin
Assistant Director
Planning & Development Div. |
| 16. | Dr. Lee Cheow Pheng
Director of Medical Development | 30. | Tuan Haji Hassan Ithnin
Principal Medical Assistant
Medical Practices Division |
| 17. | Dr. Ang Kim Teng
Deputy Director of Medical Development | 31. | Mr. Mohd. Hosni Abdullah
Senior Medical Assistant
Emergency Dept. of SGH |
| 18. | Assoc. Prof. Dr. Ernest Yeoh
Surgery Consultant, U.M. | | |
| 19. | Dr. Yao Sik King
Deputy Director of Health, State of S'wak | | |

Also in Attendance :-

1. Dr. S. Sivashunmugam
Planning & Development Division
2. Dr. Supathiratheavy Rasiah
Planning & Development Division
3. Mrs. Zawiyah Mat Johor
Planning & Development Division
4. Dr. Noorliza Mohd. Noordin
Planning & Development Division
5. Mrs. Nor Azlinda Mat Zaini
Planning & Development Division

Non-attendance with Apologies:-

1. Director of External Assistance Section
EPU
2. Principal Assistant Secretary
International Unit, MOH
3. Head of General Surgery Department
SGH
4. Principal Matron
Board of Nurses, MOH

1. INTRODUCTION

The ceremony begins at 8.00 am with welcoming speech by the Chairman.

2. PRESENTATION

- 2.1. Presentation on Emergency Services and Human Resource Development in Sarawak by Dr. Lee Khoon Siew.
- 2.2. Followed by Dr. Liding Jonyian's presentation on the "New structure and activities of Emergency Department in Kuching Hospital".

- 2.3. After that a presentation on "Ambulance Services and Emergency Medical Team in Kuching Hospital" by Mr. Mohd. Hosni Abdullah.
- 2.4. Prof. Dr. Kazuhiko Maekawa later, gave the above mentioned project's conclusion and also suggestions derived from the conclusion that has been mentioned earlier. A copy of the conclusion and suggestions are attached herewith ("Enclosures 1 and II").

3. DISCUSSION

- 3.1. The discussion was held concerning the conclusion ("Enclosure 1") and suggestions ("Enclosure II") from the above mentioned project. Dato' TKPK (P) suggested that further action should be taken in response to the proposals as follows:-

3.2. Recommendation 1

- 3.2.1 Reorganise the structure, operational policy and training for emergency services (Recommendation 1.1 and 1.2)

Action : Medical Devt. Division

- 3.2.2 Forms, check list, training and existence of the Emergency Medical Team for pre-hospital care (Recommendation 1.3 and 1.4)

Action : Medical Practices Division

- 3.2.3 Dato' TKPK (P) recommended that the task force should be implemented.

Action : Medical Devt. Division
Medical Practices Division

3.3. Recommendation 2

Apart from training activity, aspect of source of finance should be given due consideration.

Action : Manpower Planning and Training Div.

3.4. Recommendation 3

This initiative needs to be developed and upgraded.

Action : Director of Health Sarawak
Director of Kuching Hospital, Sarawak

3.5. Recommendation 4

National indicator and standard for emergency services and pre-hospital care, required to be attained. Dato' TKPK (P) recommended that this matter be brought into the National Seminar on QAP. Director of Health Sarawak and Kuching Hospital Sarawak are requested to give assistance.

Action : Director of Hospital, Kuching, Sarawak
Director of Health Sarawak
Director of Medical Practices

3.6. Recommendation 5

This recommendation concerns State of Sarawak alone

Action : Director of Health Sarawak

3.7. Recommendation 6

This recommendation is important to ensure the flows of the project. Medical Practices Division is requested to take action concerning with paramedics, while Medical Development Division, which concerns with medical officers and experts together with the existence of separate budget activity for Emergency Department. The Manpower Planning and Training Division is requested to assist in training aspect. Head of Emergency Dept, of KL Hospital is advised to continue efforts to make Medical Emergency become a separate Unit irrespective from technical field or from administration and finance. Work structure also needs to be in existence.

Action : Head of Emergency Dept, KL Hospital
Manpower Planning & Training Division
Medical Practices Division
Medical Development Division

3.8 Recommendation 7

Ministry of Health believes that even though the project has just ended, two main activities, as follows, need to be developed and cooperation from JICA side is still needed such as:

- a. training
- b. exchange of information and technology

JICA side informed that this matter is still open for discussion and they shall forward the Ministry of Health's proposal to their higher officials in Tokyo, Japan.

Action : For Information

4. STATEMENT

Opening speech by Prof. Dr. Kazuo Takeuchi and followed by Dato' Dr. Megat Burhainuddin bin Megat Abdul Rahman's speech.

5. SIGNING CEREMONY

Minutes of meetings between the Japanese Evaluation Team and Ministry of Health agreed and signed by Prof. Dr. Kazuo Takeuchi and Dr. Shahidah Abdul Manaff.

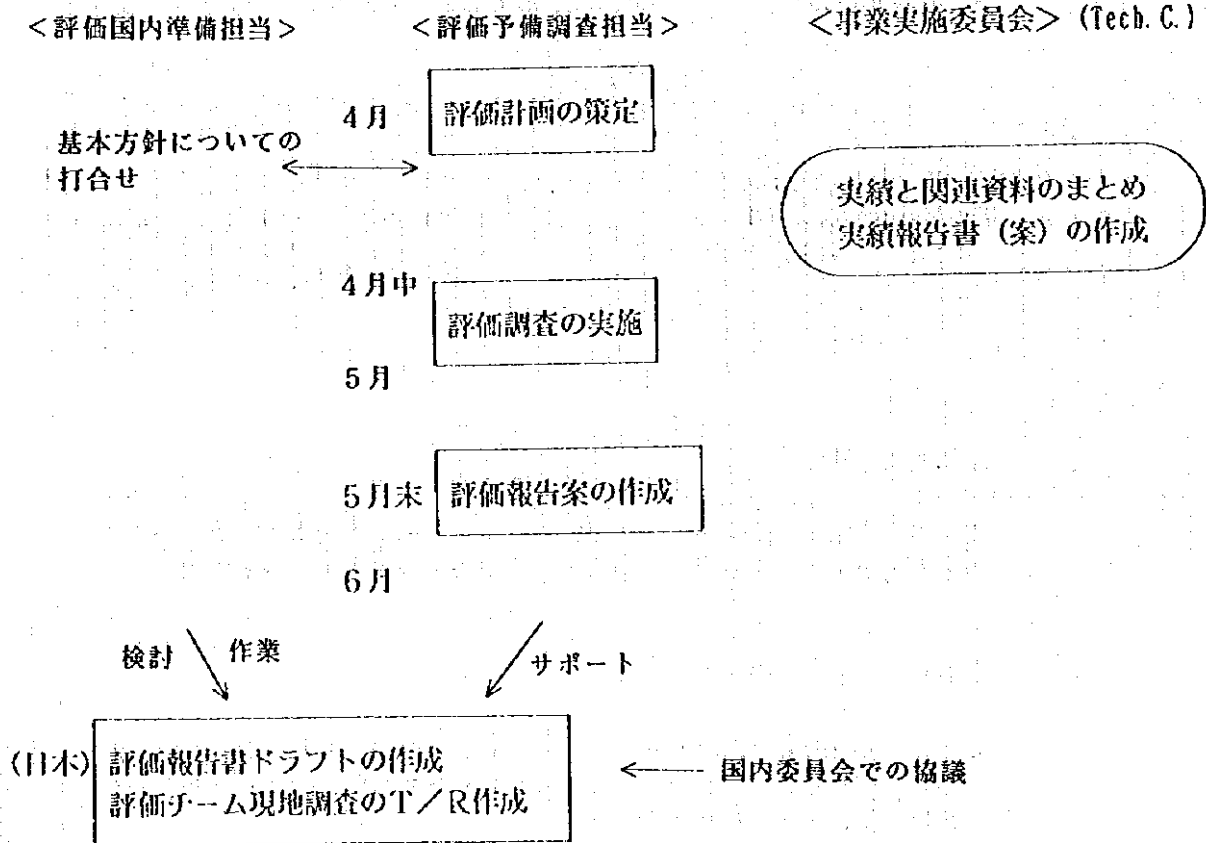
6. CLOSING REMARKS

The ceremony ends at 10.00 am with thanks from the Chairman.

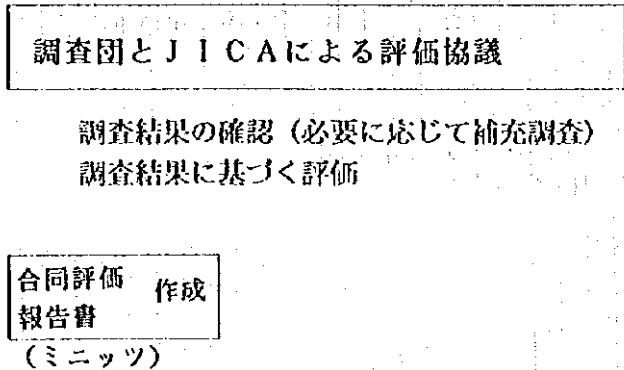
PLANNING AND DEVELOPMENT DIVISION
MINISTRY OF HEALTH, MALAYSIA

DATE : JULY 8, 1997

評価調査の実施手順について



6月下旬終了時評価調査団の現地派遣



評価調査の概要

評価の対象プロジェクト

マレーシア国サラワク総合病院救急医療プロジェクト

評価の目的

5年間のプロジェクトの協力実績を総括するとともに、JICA評価室の定めるプロジェクト終了時評価の指針に従ってプロジェクトを総合的に評価する。（評価調査では評価を行なうための判断材料として協力実績を総括するものの、プロジェクトの詳細な活動内容はプロジェクトチームにより取りまとめてもらう。）この評価結果をもとに、本プロジェクトについて、相手方及び日本方に対する教訓・提言を提示し、さらにそれを今後の技術協力をより適切かつ効果的に実施するためにフィードバックする。

* JICA事業部の評価結果の活用目的

- 今後、同様の課題について事業を計画、実施する場合に参考となる教訓を抽出する。
- マ国が本プロジェクトの成果や教訓を今後の事業発展に活用できるように、成果及び教訓を総括する。
- プロジェクト期間が終了した後、なんらかの継続的な援助（延長を除く）を実施することが、必要かつ妥当か、を判断するための資料とする。

評価の範囲

評価の対象期間は、プロジェクトの計画から調査開始時点までの期間。

評価の対象範囲は、評価の対象はサラワク総合病院とその救急医療対象地域（及び、研修その他で投入を行なった病院とその被益対象地域）におけるPDMに示されたプロジェクトの活動とその効果。（別紙参照）

評価対象（評価項目）

実施の効率、目標達成度、効果、妥当性、自立発展性と、これらに関与した要因。（別紙参照）

評価の方法

資料調査、個人及びフォーカスグループに対する面接聞き取り調査、調査票による調査、観察調査。

評価主体

最終評価は、JICA医療協力部とプロジェクト合同運営委員会（Joint Coordinating Committee）の合同評価として実施される。

評価チーム

評価チームは、評価国内準備担当、評価予備調査担当、総括評価担当（終了時評価調査団）によって構成され、現地派遣中のプロジェクト・チーム及び

チーム構成員の資格および役割分担は――

評価作業計画

別紙の通り。

*評価の方法（指標、手法等）や作業スケジュールの詳細は、JCCおよびTCと協議の上、4月中に確定する。

報告

- －評価予備調査までに、英文の実績報告書のドラフトを作成する。
- －6月10日までに、和文の評価予備調査報告書（業務報告書）を作成する。
- －終了時評価調査団の派遣までに、評価所見と結論の英文要約を作成する。
- －終了時評価調査団の帰国後――までに、和文の終了時評価調査報告書を作成する。

P D M

目的/活動の要約	客観的に立証可能な指標	確認手段	(免状)	重要な外部条件
<p>開発目標 (Goals)</p> <p>サラワク州の救急医療を向上させる。</p>	<p>救急医療、救急搬送、救急の救急搬送の遅延</p>	<p>サラワク州警察</p>	<p>*</p>	<p>一部地域によるCOVID-19の蔓延</p>
<p>プロジェクトの目標 (Project Purpose)</p> <p>マラ政府の救急医療計画に即り、プレホスピタル・ケアの向上、人材育成、およびサラワク総合病院 (KHSCH) の向上を促す。救急搬送における救急医療のレベル向上を図る。</p>	<p>プレホスピタル・ケア 救急搬送、救急搬送、救急搬送、RT/ST 救急搬送、救急搬送、救急搬送、救急搬送 SGHでの救急医療 救急搬送、救急搬送、救急搬送、救急搬送 救急搬送、救急搬送、救急搬送、救急搬送 ICU/CCU/ICU/ICU、NO/ANA/ICU 救急搬送、救急搬送、救急搬送</p>	<p>プレホスピタル・ケア 救急搬送 救急搬送 救急搬送 ICU/ICU</p>	<p>*</p>	<p>COVID-19の蔓延</p>
<p>プロジェクトの成果 (Project Outputs)</p> <ol style="list-style-type: none"> 1. SGHの救急搬送の機能および組織体制を強化する。 2. 救急医療を専門領域として開発する。 3. サラワク州の救急医療のための研修プログラムを確立する。 	<p>救急搬送、救急搬送、救急搬送、救急搬送 救急搬送、救急搬送、救急搬送、救急搬送 救急搬送、救急搬送、救急搬送、救急搬送 救急搬送、救急搬送、救急搬送、救急搬送</p>	<p>救急搬送 救急搬送 救急搬送 救急搬送 救急搬送</p>	<p>*</p>	<p>COVID-19の蔓延 救急搬送の不足 救急搬送の不足 救急搬送の不足</p>
<p>プロジェクトの活動 (Project Activities)</p> <ol style="list-style-type: none"> 1. 日本人専門家の派遣。 2. 日本でのC/P研修 3. 機材供与 4. その他 	<p>救急搬送、救急搬送、救急搬送、救急搬送 C/P研修 機材供与 その他</p>	<p>R/D, ISI 救急搬送、C/P研修 機材供与 その他</p>	<p>*</p>	<p>COVID-19の蔓延 救急搬送の不足 救急搬送の不足 救急搬送の不足</p>

PRDM※

目的/活動の要約	客観的に立証可能な指標	確認手段	(実績)	重要な外部条件
<p>課題目標 (Goal) サラワク州の救急医療を向上させる。</p>	<p>救急部、救急隊員数、救急車の数等の増加</p>	<p>インタビュー等</p>	<p>*</p>	<p>- 管理職による適切な意思決定の促進</p>
<p>プロジェクトの目標 (Project Purpose) マダガスカルの救急医療計画に則り、プレホスピタル・ケアの向上、人材育成、およびサラワク総合病院 (MNSCH) での研修センターにおける救急医療のレベル向上を図る。</p>	<p>プレホスピタル・ケア 救急車、救急隊、救急士、SC SGHでの救急医療 救急隊員研修、ナチン・マシンの設置 救急センターの整備、救急隊員 救急隊員への研修等</p>	<p>救急隊員数 救急車の数 救急士の数 救急センターの整備状況 救急隊員への研修状況 救急隊員への研修回数</p>	<p>*</p>	<p>- 適切な意思決定の促進 - 適切な管理職による意思決定の促進</p>
<p>プロジェクトの成果 (Project Outputs) 1. SGHの救急部の機能および組織体制を強化する。 2. 救急医療を専門領域として開発する。 3. サラワク州の救急医療のための研修プログラムを確立する。</p>	<p>救急部員数 救急車の数 救急士の数 救急センターの整備状況 救急隊員への研修回数 救急隊員への研修内容 救急センターの整備状況 救急隊員への研修回数 救急隊員への研修内容 救急センターの整備状況 救急隊員への研修回数</p>	<p>救急隊員数 救急車の数 救急士の数 救急センターの整備状況 救急隊員への研修状況 救急隊員への研修回数</p>	<p>*</p>	<p>- 適切な意思決定の促進 - 適切な管理職による意思決定の促進 - 適切な意思決定の促進</p>
<p>プロジェクトの活動 (Project Activities) 1. 日本人専門家の派遣。 2. 日本でのC/P研修 3. 機材供与 4. その他</p>	<p>研修回数 毎月4～6人 研修内容 C/P研修 研修回数 毎月3～4人 研修内容 C/P研修 研修回数 毎月1～2回 研修内容 C/P研修 その他</p>	<p>R/D, TSI 研修回数、C/P研修 研修回数、C/P研修 研修回数、C/P研修 その他</p>	<p>*</p>	<p>- 1992年8月の時点 - 適切な意思決定の促進 - 適切な意思決定の促進 - 適切な意思決定の促進 - 適切な意思決定の促進 - 適切な意思決定の促進</p>

活動方針十箇(プロジェクト実施委員会; 1992年11月12日)

活動目標 (Objective)	概要	活動年 92 93 94 95 96
# 1	1. SCSの前職員が協力を	<ul style="list-style-type: none"> ■ ■ ■ ■ ■
	<p>1. 専門医と医師、看護婦、および救急患者のケアに必要な全ての職種の人々の積極的な関わりを促す。</p> <p>1) 医師とメデikalの緊密な関係を確立する。</p> <p>2) 救急患者に関する情報が確実に伝達されるようにする。</p> <p>2. 医師の役割は、いつでも対応できるようにすること教育することである。</p> <p>1) コンサルテーションがあれは速やかに対応する。(＊継続的には必要に応じて定期的な研修がある。)</p> <p>2) 救急部のMOとMAに対する現場教育や討議に参加する。</p>	<ul style="list-style-type: none"> ■ ■ ■ ■ ■
	2. 現在の救急部を再編する。	<ul style="list-style-type: none"> ■ ■ ■ ■ ■
	<p>1. 新しい運営方針を導入する。</p> <p>2. 救急部の配置(レイアウト)を変更する。</p> <p>3. 救急部スタッフを固定する。(＊この点に関しては諸君に随分お話しを聞かなくてはならないと認識がある。)</p> <p>4. 救急部を正式な部門とし、機能と人員の面で組織構造(ヒエラルキー)を明確化する。</p>	<ul style="list-style-type: none"> ■ ■ ■ ■ ■
	3. 救急部と院内における救急患者の移送について改善する。	<ul style="list-style-type: none"> ■ ■ ■ ■ ■
	4. プレホスピタルケアのレベルを向上する	<ul style="list-style-type: none"> ■ ■ ■ ■ ■
	<p>1. 救急部または救急車待機所に救急医療コントロール・センターを設ける。</p> <p>2. 救急パラメディカル(MA、看護婦)、救急車運転手、救急助手に対するトレーニングを行なう。</p> <p>1) サラワクでの研修</p> <p>2) 日本でのC/P研修</p> <p>3. 救急部にある現有救急車の機材をレベルアップする。</p> <p>4. 救急部の適正利用に関する公衆教育を行なう。</p>	<ul style="list-style-type: none"> ■ ■ ■ ■ ■
	5. 診断、治療、手帳に関する標準手帳を改善して救急部の緊要レベルを向上させる	<ul style="list-style-type: none"> ■ ■ ■ ■ ■
	<p>1. 機材を適正に使用できるようにする。</p> <p>1) JICAの供与する機材</p> <p>2) 病院が購入した機材</p> <p>2. 新しい運営方針と業務規定を実施する。</p> <p>3. 改修された新しい救急部の施設・設備を最大限に活用する。</p>	<ul style="list-style-type: none"> ■ ■ ■ ■ ■

長崎県プロジェクト実施委員会；1992年11月12日

活動目標 (Output)	戦略	活動	活動年
#2	1. 救急部の適正利用に 関する公衆教育を行 なう	1. 教育冊子の作成と配布 2. マスメディアを通じての教育と広報 3. 病院内での公衆教育プログラム	92 93 94 95 96
	2. SGI救急部での 研修プログラムの 開発	1. MOの3回目的の配属にあたっては救急部をローテートさせる。（*聴診器の配属ははらわれない） 2. (ローテートに対して) 救急部ではさまざまな診療科目について教育する。 3. SGIのMO (MRG, FRCS) とくに救急医療の卒後教育資格を取得する意志のある者は、5カ月間 救急部でトレーニングする。	92 93 94 95 96
	3. 三次医療を担当する 病院では救急部は 正式な部門として 認知する	サラワクワ州医師局長から保健省に対し、書類をもって正式に申請する。	92 93 94 95 96
	4. 救急患者にとって必 要な場合には、各病 院の専門医は誰でも 積極的に専門診療を 提供するようにする	救急患者の診療に関して救急部の医師から依頼があった場合には、病院の専門医はすべて助言や治療、 手術など専門医としての協力を行なうようにする。	92 93 94 95 96
#3	1. プレホスピタル・ ケアのレベル向上	サラワクワ州における救急サービスを改善するためのトレーニング・プログラムを開発する。 (「プロジェクト5カ年計画の概要；トレーニング」を参照のこと。)	92 93 94 95 96
	2. 救急部の診療レベル の向上	サラワクワ州における救急医療を改善するためのトレーニング・プログラムを開発する。 (「プロジェクト5カ年計画の概要；トレーニング」を参照のこと。)	92 93 94 95 96

関心事項	定義	キーワード	評価事項
目標達成度 (Effectiveness)	プロジェクトの成果はどの程度目標の達成に寄与したか、あるいは寄与する見込みがあるか？ (成果の目標達成に対する有効性)	成果-プロジェクト目標	<ol style="list-style-type: none"> 1. どのような成果が期待されていたか 2. どのような外部条件の変化があったか 3. 実際の成果は何か 4. それらの成果はなぜ達成できたか/なぜ達成できなかったか 5. 目標達成のための戦略はどのように変更されたか、あるいは変更される必要があるか 6. 実際の成果は目標の達成のためにどのような意味をもつか (目標はどの程度達成されたと考えられるか) 7. 今後どのような取組みが進められる必要があるか 8. その取組みに対して日本の援助が必要か(かつ可能か)もし必要とすればそれは何か
実施の効率性 (Efficiency)	プロジェクトの活動や投入した資源はプロジェクトの成果をあげるうえでどれだけ効率的だったか？ (活動・投入の成果に対する有効性)	投入-成果 他の同様のプロジェクト 基準設定 コスト	<ol style="list-style-type: none"> 1. 計画された活動と投入が予定通り実施されたか 2. 実施されなかったとすれば、どんな事情によるか 3. 種々の投入(活動、技術移転内容、供与機材など)のうち、何がプロジェクトの成果と目標達成に対して効果的で、何は期待したほど効果的でなかったか 4. 1. について、その要因は何であったか 5. 日本側(マニラ側(およびそれ以外))の、本プロジェクトに対する投入の総量と成果の対比 6. 他に同様の課題に関する比較可能なプロジェクトがあれば、それとの比較(投入と成果)および差異の理由
効果 (Impact)	プロジェクトが実施された結果としてどのような予期したおおよび予期しなかった効果や影響が認められたか？ (影響と波及効果)	プロジェクト目標 - 開発目標 その他の正・負の影響	<ol style="list-style-type: none"> 1. 受益者に対する期待された効果はどの程度発現しているか (おおよび効果発現を左右したと思われる要因) 2. 実際の成果は開発目標の実現に対してどのような意義と有用性をもつか 3. その他の波及効果や正負の影響としてどのようなことが認められたか <ul style="list-style-type: none"> - サラワク総合病院(SCH)のレベル - 地域保健医療システムのレベル - マレーシア・レベル - その他

計画の妥当性 (Relevance)	プロジェクトは研究政策やニーズの 優先度に基づいているか？ (意義、重要性、関連性)	計画（戦略）の全体評価 開発政策、ニーズ優先度 目標設定、論理的整合性 外部条件の評価の適正さ	<ol style="list-style-type: none"> 1. 本プロジェクトの課題と目標はマ国の保健開発計画／救急医療計画 の中でどのような意義をもっているか、また現在もっているか。 2. 本プロジェクトの課題と成果は、日本の援助方針に合致しているか 3. 本プロジェクトの課題と成果は、サラワク州のニーズに優先度に対 応しているか。 4. 外部条件や戦略、指標の設定とその後の変更、および諸経の対応は 顧みて適切であったか
自立発展性 (の見過し) (Sustainability)	プロジェクトの成果が継続的に維持 される見込みはあるか？	成果と環境条件の吟味 例) 政策的支持・独立 組織体制の確立 Ownership 財政的要因 技術の適正度 社会文化的要因 環境的要因 外部条件	<ol style="list-style-type: none"> 1. 維持すべき成果および機能は何か 2. どのような環境（外部条件を含む）の変化が今後予測されるか 3. 自立発展性を確保するために必要な条件は何か 4. * 成果の維持と目標達成のために、今後どのような取組みが必要か 5. Ownershipは、どこに、どの程度あるか、それは適切か 6. 政策面で、理念のおよび具体的な支持が存するか 7. 必要な行政措置（法律・規約あるいは職務規定など）は整備されて いるか、あるいは整備される見込みがあるか 8. プロジェクト目標の達成に向けて成果を自立発展させるために必要 な組織（および運営管理能力）は確立されているか、あるいは確立 される見込みはあるか 9. 必要な人材及び人材のプロローは確保されるか 10. 維持すべき成果の維持運営管理に要するコスト (Recurrent Cost) はどのくらいと推定され、それはどのようなようにして確保される予定か <ol style="list-style-type: none"> 1. 技術面での成果（各種技術と研修コース内容）は、ニーズ、有用性 普及と定着の可能性、文化的特性、活用可能な資源などからみても適 正と考えられるか、適正でない点があるなら、それはなぜか。 2. 自立発展性を考慮して行なわれた活動、配賦で、何が有効と考えら れるか。

効果測定項目

目 的(Effectiveness)

目 的 本邦の救急医療に際し、プレホスピタル・ケアの向上、人材育成、およびサラワク総合病院
と連携する救急部における救急医療のレベル向上を図る

期待された成果

- (1) SGHの救急部の機能および組織体制は強化されたか
 1. 他の病院及び他の診療科との関係において、SGH救急部の役割・機能が明確になり、かつ周知されているか
 2. 文庫化された運営方針、組織体制、服務規定、運営マニュアルがあり、関係者はこれにしたがっているか
 3. 救急部の適正利用度
- (2) 救急医療を専門領域として開発する。
 1. 救急医療の専門領域が明確にされ、かつ認知されるようになったか
 2. 救急診療マニュアルは作成されているか
 3. 他の診療科との連携・協力は改善されたか
- (3) サラワク州の救急医療のための研修プログラムを確立する。
 1. ニース別研修受講者と修了者の数
 2. 養成された研修講師の数
 3. 研修コース教材および講師用教材の数と種類

目 録

- (1) プレホスピタル・ケアの機能と質はどのように向上したか
 1. プレホスピタル・ケアの機能と質の評価
 - * モニタリングおよび比較可能な機能と質の指標の設定
例) 利用率、レスポンス・タイム、現場・搬送中の救急処置件数、など
- (2) SGHおよびSGH救急部における救急診療の機能と質はどのように向上したか
 1. SGHおよびSGH救急部における救急診療の機能と質の評価
 - * モニタリングおよび比較可能な質指標の設定
 - * ママ病院評価基準の適用
- (3) 救急医療に関わる人材はどの程度育成されたか
 1. サラワク州において、救急医療に関わる人材は、職種・量・配置においてどのように改善されたか
 2. 研修受講者は、研修で習得した技術と知識を実際に活用しているか。
 3. プロジェクトによって新しく活用されるようになった知識・手順、技術とその活用状況
- (4) 今後どのような取組みが進められる必要があるか、その取り組みに関して、日本の援助が必要かつ可能か