

When they go on their own they can either get leave of absence without pay or resign from the government service. Those on scholarships will go on full pay as well as retaining their seniority in the service. Those on government scholarships are bonded to serve the government for a number of years when they return. Those who resign can rejoin if they show proof that they resign to pursue higher degree.

Besides this, the government, the Malaysian Medical Association, the many Specialities Associations and society organise on-going continuing education for the Medical Officers and specialists.

Medical Officers get their training either locally i.e. organised by the three local universities or overseas most commonly Britain or Australia.

For Paramedic, the responsibility for in-service training lies mainly with the government. For these, the specialty training are done at the Kuala Lumpur General Hospital and at other selected centres. Trainers for paramedic usually receive their training at the University of Malaya.

6. Any course focussed on Emergency Case in Sarawak

Except for Cardiopulmonary Resuscitation or CPR there is no other course on Emergency treatment in the state at this moment.

IV. IN RELATION TO THE PLANNING OF THE PROJECT

1. Body for Planning and Implementation

Planning for the whole state is done at the State Health Office and the implementation of projects is monitored at state and local level.

The proposal for this project was initiated following the situational analysis made for the 5th Malaysia Plan which identified that one of the major problems in the state is the weakness of its emergency service - both in term of scope and depth of service.

2. Committee Promoting this Project

At the start of this project a Japanese Neurosurgeon Dr. Torao Fujii who was a JICA Consultant worked with the Medical Planning Officer to draw up the initial proposal and it was this proposal which has been submitted and it still stand as such today.

When implemented, this project will be monitored by the Medical Planning Office as well as by the Medical Superintendent of the Sarawak General Hospital.

3. Survey Study implemented in connection with this project

There was no special survey done in connection with this project. All proposal for the project was based on available data and on the situational analysis done earlier for the 5th Malaysia Plan.

4. Plan Expected to be further Developed

Depending on the experience and input from those involved in the project later on the plan may be developed further.

5. Data on Emergency Cases

Depending on the type of emergency case they either die on the spot for example in the case of severe road traffic accidents or logging accidents involving the head or they may die on the way to hospitals or in the hospitals itself.

Emergency cases also die at primary level facilities but this is rare with the availability of Medical Evacuation Service. Usually death will be at the secondary and tertiary level where the most serious cases are referred and treated.

Statistics on 'emergency' death are difficult to obtain from present statistics. Deaths due to accidents can be considered as emergency death but may not apply to all cases.

With the improvement of emergency service, deaths due to severe head injuries, multiple fractures etc. can be prevented. More important perhaps will be the reduction in the permanent post injury sequelae (paralysis or brain damage) with better emergency care.

Improvement will be more effective if the knowledge and skill of staff working in emergency area can be upgraded so that early diagnosis can be made and appropriate treatment can be given. Along with the upgrading of knowledge and skill upgrading of equipment and physical facilities are also important.

It is difficult to accurately pin point whether emergency deaths is due to lack of skill, lack of equipment or lack of transportation as no such study has even been done. At the moment, it is probably a combination of all these factors.

6. Main target of these new Emergency Centre

The main target will be severe motor vehicles injuries severe logging injuries and other injuries due to other causes.

7. Plan for Training of Emergency Centre

The main emphasis of training will be in the rapid identification of type of injuries sustained, appropriate resuscitative measures to be undertaken and appropriate laboratory and X-ray investigation and appropriate treatment.

In addition training will also be needed on supervisory staff on the organisation of the unit so that it can be run more effectively.

8. Those to be trained

In the project itself the Surgical Specialists, the Medical officers and the paramedic serving at the Emergency Centre and the peripheral emergency centres will be the main target for training.

9. Main target area of Technical Cooperation

At present the main areas of technical cooperation for JICA that have been identified are in the areas of training and supply of certain equipment.

10. Additional Budget

For the physical upgrading of the emergency centre at Sarawak General Hospital Kuching the fund required will be in the region of MR\$450,000.

For the running of the renovated Accident and Emergency Department the additional fund required per year for additional 40 staff salaries etc. will come to MR\$620,000.

For the technical cooperation project the cost required will be for payment of passages and allowances for officers from outside to be trained at this centre. This will amount to MR\$ 30,600. All the above are expected to be borne by the Malaysian Government.

V. DESCRIPTION OF THE PROPOSED PROJECT

1. The Title of the Project : Upgrading of Accident & Emergency Care Service in Sarawak.
2. Proposal: It is proposed to upgrade the Accident and Emergency Service in the State of Sarawak by first improving the services at the Sarawak General Hospital and then through training of medical personnels from 7 other hospitals in the State namely Sri aman, Sibul, Miri, Limbang, Bintulu, Sarikei and Kapit.

The duration of the project will depend on progress but it is expected to be at least over a 5 year period.

2.1 It will have the following components:-

(1) Despatch of Japanese experts to Sarawak General Hospital, Kuching to train doctors and paramedical personnel in accident and emergency service and emergency neurosurgery.

(a) Long term experts (more than 6 months)

(i) doctors

2 neurosurgeons

1 orthopaedic surgeon

1 general surgeon

(ii) 4 staff nurses (2 to work in operating theatre and 2 in surgical ward)

- (iii) 1 project coordinator
- (iv) 1 medical equipment technician/repairer
(JOCV, if possible)
- (b) Short term experts (1-2 weeks)
2 doctors every year, to give lectures and demonstrations of surgery.
- 2.2 Training of Doctors and Paramedical Personnel in Sarawak General Hospital.
 - (a) From Sarawak General Hospital
 - 2 general surgeon
 - 1 orthopaedic surgeon
 - 2 registrars
 - 5 medical officers
 - 6 house officers
 - 15 medical assistants and 5 junior hospital assistants (from A & E units)
 - 50 staff nurses in operation theatre, surgical wards, A & E unit and Intensive Care Unit.
 - 20 Assistant nurses/community nurses in A & E unit, operation theatre, surgical wards, and intensive care unit.
 - 5 nursing sisters in surgical wards, operation theatre and intensive care unit.
 - (b) From Lau King Howe Hospital
 - 1 general surgeon
 - 1 orthopaedic surgeon
 - 8 medical assistants
 - 4 staff nurses
 - 4 community nurses

- (c) From Miri Hospital
- 1 general surgeon
 - 8 medical assistants
 - 4 staff nurses
 - 4 community nurses

- (d) For 5 other hospitals
- 5 medical officers
 - 10 medical assistants
 - 10 staff nurses
 - 10 community nurses

2.3 Training of doctors and paramedical personnel in Japan

- (a) 5 nursing sisters/staff nurses - for 6 weeks
- From operating theatre - 1
 - From male and female surgical ward - 2
 - From paediatric surgical ward - 1
 - From orthopaedic ward - 1
- (b) 1 medical assistant - for 2 months
In the use of Electro-encephalogram polygraph
and minor maintenance of this machine.
- (c) 2 general surgeons - for 6 months
For training in microsurgical techniques.

2.4 Donation of medical equipment by Japan International
Cooperation Agency (JICA)

about US\$400,000 a year for 5 years.

List of Medical Equipment Required to Upgrade and
Improve Accident & Emergency Service and Emergency
Neurosurgery Service in Sarawak General Hospital, Kuching

<u>Description</u>	<u>Quantity</u>	<u>Estimate Cost in Yen (M\$)</u>	
1. Adult plastic skull model	1 set	90,000	(M\$2,000)
2. Brain Model	1 set	180,000	(M\$4,000)
3. Anaesthesia apparatus with build in ventilator	2 sets	10,000,000	(M\$222,300)
4. Neurosurgery operating table	1 set	2,850,000	(M\$63,400)
5. ECG polygraph (12 channels)	1 set	8,200,000	(M\$182,300)
6. Neurosurgical operating instrument set	1 set	4,860,000	(M\$108,000)
7. Brain microsurgery, standard set	1 set	1,380,000	(M\$30,700)
8. Blood vessel and aneurysm surgery set	1 set	2,470,000	(M\$54,900)
9. Ventricle peritoneal anastomosis set	2 sets	4,480,000	(M\$99,600)
10. Ventricle Drainage set	2 sets	1,040,000	(M\$23,200)
11. Craniotomy set	2 sets	8,840,000	(M\$196,500)
12. Angiography set	2 sets	1,350,000	(M\$30,000)
13. Orthopaedic operating table	1 set	3,700,000	(M\$82,300)
14. Kirschner wire traction instrument	1 set	225,000	(M\$5,000)
15. Cruikshank skull traction set	1 set	450,000	(M\$10,000)
16. Orthopaedic operating instrument set	1 set	2,700,000	(M\$60,000)
17. Dermatological surgery, standard set including skin transplantation	1 set	1,177,000	(M\$26,200)
18. Bone and joint surgery, standard including fixation device for fingers	1 set	1,519,000	(M\$33,800)
19. Electric bone surgery set	1 set	1,625,000	(M\$36,200)
20. Metal supports for bone fixation	2 sets	2,230,000	(M\$49,600)
21. Laminectomy and spinal cord surgery	1 set	2,338,000	(M\$52,000)
22. Anterior spine fusion	1 set	1,525,000	(M\$33,900)
23. Special X-ray TV system (C-Arm) (One for operating theatre and one for A & E unit)	2 sets	71,991,000	(M\$1,600,000)
TOTAL :		135,220,000	(M\$3,005,900)

Estimated Expenditure to be Incurred for the training of Doctors and Paramedical Personnel From Sibn and Miri at the Sarayak General Hospital in Kuching.

Hospital From where the officer is taken	Category of Officer	No. of Officers	Transfer Grant for 3 months temporary postings	Subsistence & Lodging Allowance for the transfer	Passage	Total
Lau King Howe Hospital, Sibn	General Surgeon	2 (1 relief)	2x550=1,100	2x10x(30+24)=1,080	2x106=252	2,432
	Orthopaedic Surgeon	1	1x550=550	1x10x(30+24)=540	116	1,206
	Medical Assistant	4	4x250=1,000	4x10x(22+11)=1,320	4x106=504	2,824
	Staff Nurse	4	4x250=1,000	4x10x(22+11)=1,320	4x106=504	2,824
	Community Nurse	4	4x250=1,000	4x10x(22+11)=1,320	4x106=504	2,824
	Junior Hospital Assistant	4	4x150=600	4x10x(18+09)=1,080	4x126=504	2,184
Miri General Hospital	General Surgeon	2 (1 relief)	2x550=1,100	2x10x(30+24)=1,080	2x300=600	2,780
	Medical Assistant	4	4x250=1,000	4x10x(22+11)=1,320	4x300=1,200	3,520
	Staff Nurse	4	4x250=1,000	4x10x(22+11)=1,320	4x300=1,200	3,520
	Community Nurse	4	4x250=1,000	4x10x(22+11)=1,320	4x300=1,200	3,520
	Junior Hospital Assistant	4	4x150=600	4x10x(18+09)=1,080	4x300=1,200	2,880
					TOTAL:	39,524
					SAY :	39,524

APPENDIX 1

Post Approved & Filled By (Category in SGH Kuching)	Total Category in Grade A				Total Category in Grade B				Total Category in Grade C				AN/MN		Total Category in Grade D		TOTAL	
	Doctors		Sisters		Nurses/JO		AN/MN		in Grade C		AP/F		in Grade D		AP/F			
	AP	F	AP	F	AP	F	AP	F	AP	F	AP	F	AP	F	AP	F		
OPD	14	8	14	8	1		8	6	7	14	39	45	15	16	41	46	102	105
Medical	17	14	17	14	4	2	4	2	45	39	45	39	20	14	86	35	152	90
Surgery	18	17	18	17	2	2	2	2	37	30	37	30	3	3	31	23	88	72
OAG	18	13	18	13	4	3	4	3	69	76	59	76	30	28	80	72	171	164
Paediatric	14	15	14	15	4	1	4	1	31	24	31	24	14	8	42	25	91	65
Orthopaedic	3	3	3	3	1	1	1	1	18	14	20	17	9	6	25	16	49	37
Anaesthesia	4	3	4	3	1	1	1	1	12	14	12	14	5	5	16	11	33	29
Eye	2	2	2	2	1		1		5	5	5	5	2	2	9	7	17	14
E.N.T.	2	2	2	2	1		1		12	12	12	12	4	4	13	11	28	25
P.T.U.	4	2	4	2	2	1	8	7	12	12	12	12	5	8	21	26	45	47
X-Ray	2	2	2	2			15	13					1	1	15	17	32	32
Laboratory	1		2	1											1		3	1
Disp./Stor			7	5			3				33	34			4	6	47	45
Kitchen/Mess			2	1							4	2			32	29	38	32
Engineering			5	3			6	2			17	8			48	33	75	46
Admin.	10	8	13	10	6	6	21	18	36	61	68	88	18	31	179	216	281	332
Skin	1		1														1	
Plastic	3		3												11		14	
TOTAL	113	89	131	101	27	17	79	55	284	301	404	406	127	126	654	513	1,268	1,136

Key: AP - Approved Post
F - Filled Post

MAINTENANCE COST OF INSTRUMENTS EQUIPMENT

Date Issue	Contractor's Name	Total Amount	LPO Number	Remarks
8.1.90	Meditel Sdn. Bhd. 12A, Jalan 13/4 46200 Petaling Jaya.	44,920.00	H.054518	Spare parts for Mevatron 74.
9.1.90	- " -	14,350.00	H.055283	Spare parts for Mevatron 77.
26.6.90	- " -	48,000.00	H.055423	Spare parts for Mevatron 74
30.6.90	- " -	47,091.00	H.055444	Spare parts for Mevatron 74 & 77
7.7.90	H-Need Car Air Con Service, Kuching.	1480.00	H.055443	Freon Gas for Mevatron 74 & 77
10.8.90	Meditel Sdn. Bhd. 12A, Jalan 13/4 46200 Petaling Jaya.	400,500.00	H.055425	Spare parts for Mevatron 74
31.12.90	- " -	48,080.00	H.055445	Spare parts for Mevatron 74 & 77
	TOTAL :	673,371.00		

SPARE PARTS FOR GAMMA CAMERA III III

Date Issue	Contractor's Name	Total Amount	LPO Number	Remarks
8.9.90	Meditel Sdn. Bhd. 12A, Jalan 13/4 46200 Petaling Jaya.	45,490.00	H.054153	Spare parts for Gamma Camera
10.90	- " -	48,315.00	H.257486	Spare parts for Gamma Camera.
16.8.90	- " -	68,792.00	H.252429	Spare parts for Gamma Camera.
	TOTAL :	173,371.00		

APPENDIX III

Number of Doctors trained in Western Countries and their Specialities

		<u>Speciality</u>
1.	Dr. Chew Peng Hong, MBBS (Mal), MRCP (UK), FCCP (USA)	Medicine
2.	Dr. Chandran A/L Krishnan, MBBS (Mal), MRCP (UK)	Medicine
3.	Dr. Wong Chee Liang, MBBS (London), MRCP (UK)	Medicine
4.	Dr. Siew Hueh Fen, MBBS (S'pore), M.Med (S'pore), MRCP (UK), MRCP (Ireland)	Paediatrician
5.	Dr. Philip Raja, MBBS (Mal), MRCP (UK)	Medicine
6.	Mr. Paul Chew Chee Ching, MBBS (S'pore), FRCS (UK)	Orthopaedic
7.	Mr. Goh Kiang Hua, MBBS (Mal), FRCS (Edin.)	Surgery
8.	Mr. Lim Joe Kiong, MBBS (Mal), FRCS (Edin.)	Surgery
9.	Dr. Wong Chee May, MBBS (London), MRCOG (UK)	Obsterician & Gynaecologist
10.	Dr. Jenny Goh Wak Lee, MBBS (S'pore), MRCOG (UK)	Obsterician & Gynaecologist
11.	Dr. Mohamad Yusop Saad, MBBS (Mal), M.S. (ORL)-UKM	ENT Specialist
12.	Dr. Wong May Sum, MBBS (Mal), FFARCS (UK)	Anaesthesiologist
13.	Dr. Jaswant Singh, MBBS (Mal), PLAS (India), DMRT (London)	Radiotherapist
14.	Dr. Norulhuda Bt. Nasiruddin, MBBS (Mal), DMRD (London), FRCS (London)	Radiologist
15.	Dr. Ng Seng Man, MBBS (Mal), M.MED (Radiology)(UKM)	Radiologist

No. of Expatriates and their specialities :

1. Dr. Tin Aung Aye, MBBS, D.O. (Rangoon)
2. Dr. Mohd. Ali Baig, MBBS (Hyderabad, India).

SCHEDULE J

CLASSIFICATION OF OPERATIONSOPERATION TYPE AGeneral Surgery

Porta-Caval Shunt
 Spleno-renal Shunt
 Meso-caval Shunt
 Whipple's operation
 Radical Pancreatectomy
 Major Liver Resections
 Pharyngo-laryngo-oesophagectomy with gastric reconstruction
 Reconstruction of Pile Ducts

Urology and Nephrology

Transplantation and Donor Nephrectomy

Cardiology

Cardiopulmonary Bypass (Open heart surgery)
 (i) Congenital Heart Diseases: ASD, VSD, PS, Tetralogy of Fallot & others.
 (ii) Valve Replacement or valvotomy
 (iii) Coronary Artery Bypass Surgery

Neurosurgery

Craniotomy and excision of intra-ventricular and para-ventricular tumours.
 Craniotomy and excision of supratentorial and para-tentorial tumours.
 Craniotomy and excision of tumours transtentorially.
 Repair of encephaloceles by transfrontal route.
 Hemispherectomy

Plastic and reconstructive surgery

Cranio-facial Surgery eg. Correction of Nasal Encephalocele, Treacher collins, Aperts, Cruzon or Anophthalmia.

OPERATION TYPE BGeneral Surgery

Total Oesophagectomy
 Yudin's operation
 Allison's operation
 Partial gastrectomy
 Total gastrectomy
 Gastro-jejunostomy
 Vagotomy with Bowel
 Ileo-Transverse anastomosis
 Hemicolectomy-RI/Lt
 Anterior Resection

Bladder

- (i) Total cystectomy
- (ii) Partial cystectomy
- (iii) Endoscopic surgery

Urethra

- (i) Urethroplasty

Penis

- (i) Amputation

Testes

- (i) Orchiectomy

Prostate

- (i) Trans Urethral Resection
- (ii) Open

Gynaecology

Pelvic exenteration

Wertheim's Hysterectomy

Extended Hysterectomy

Abdominal Hysterectomy

Vaginal Hysterectomy

Tubal Repair Surgery

Ovarian Cystectomy/salpingo-oophorectomy

Hymenectomy

Ophthalmology

Intraocular lens implant

Keratoplasty: Lamellar or penetrating

Retinal detachment surgery

Intraocular foreign body removal

Strabismus surgery

Repair of severe perforating injuries of the eyeball

Glaucoma surgery

Dacryocystorhinostomy

Dacryocystectomy

Repair of several lacrimal passages

Exenteration of orbit

Otorhinolaryngology

Tympanoplasty

Stapedectomy

Sacculus decompression

Lateral Rhinotomy

Maxillectomy

Trans-sphenoidal hypophysectomy

Commando operation of the jaw for tumours of oropharynx

Pharyngo laryngectomy

Laryngectomy - Total

- Partial

Repair of laryngeal and tracheal stenosis

Excision of laryngocele

Cordepexy for adductor palsy of the vocal cords
Radical neck dissection
Partial and complete parotidectomy
Fronto ethmoidectomy
Rhinoplasty

Dental

Open reduction of fractured mandible
Reduction and cranio-maxillary fixation of Midface fracture
Open reduction and direct wiring of zygomatic complex fracture
Major repair of oro-facial wounds
Surgery of massive cysts of the jaw
Surgery of oral cancer
Resection and reconstruction of the jaws
Temporomandibular joint surgery
Surgical correction of developmental jaw deformity
Sulcus deepening procedures (Preprosthetic Surgery)

Traumatic

Toilet and suture with reductions of major compound fractures and dislocations.
Open reduction of dislocations:
(a) Hip
(b) Knee
(c) Shoulder
(d) Elbow
(e) Ankle
Open reduction of major fractures with internal fixation

Orthopaedic

Release operation of torticollis
Exploration of spine with or without internal fixation
Antero lateral decompression of spine
Laminectomy
Drainage of Psoas Abscess
Putti Platt operation
Excision of head of radius
Partial hip replacement for fracture neck of femur
Release operation of constrictures:
(i) Hip
(ii) Knee
Osteotomies
Osteotomy - Osteoclasis
Amputations:
(i) Forequarter
(ii) Hindquarter
(iii) Disarticulation of shoulder
(iv) Disarticulation of hip
(v) Above knee amputation
(vi) Through knee amputation
(vii) Below knee amputation
(viii) Syme's amputation
(ix) Mid-tarsal amputation

Manisectomy

Arthrotomy of hip, knee, shoulder, elbow
Excision of bone tumours
Wedge tarsectomy
Triple arthrodesis
Kellers' operation
Mayo's operation
Excision of myositis Ossificans
Bone grafting
Total hip replacement for arthritis of the hip or any other indication

Neurosurgery

Craniotomy

Retrogasserian rhizotomy
Suboccipital craniectomy
Cervical laminectomy
Anterior cervical fusion
Lumbar laminectomy
Exploration of Brachial plexus
Repair of meningocele
Axial-occipital fusion or atlanto-occipital fusion
Major repair of scalp, skull, dura and brain following trauma
Carotid endarterectomy and/or arterial graft
Thalamotomy or papillidotomy
Cordotomy

CARDIOLOGY

Close Heart Surgery

- (i) Repair Coarctation of Aorta
- (ii) Closed Mitral Valvotomy
- (iii) Aorto-Pulmonary Shunt
- (iv) Banding of Pulmonary Artery
- (v) Closed Pulmonary Valvotomy with or without formalin injection of PDA

Other Cardiac Vascular Surgery

- (i) Insertion of Pacemaker Unit epicardial lead
- (ii) Replacement of pacemaker wire (epicaedial)
- (iii) Cardiac trauma-repair
- (iv) Exploration for bleeding
- (v) Aortic/Peripheral vascular Aneurysm repair
- (vi) Aortic Dissection Repair
- (vii) Aortic Rupture Repair
- (viii) Pericardiectomy
- (ix) Vascular endarterectomy
- (x) Vascular grafts

Pulmonary Surgery

- (i) Decortication
- (ii) Lung resection

Oesophageal Surgery

- (i) Oesophagectomy/oesophago-gastrorectomy
- (ii) Heller's operation
- (iii) Anti-reflux procedures
- (iv) Repair of Ruptured oesophagus

Diaphragmatic Surgery

- (i) Repair of congenital hernias
- (ii) Repair of ruptured diaphragm
- (iii) Anti-reflux procedures

Mediastinal Surgery

- (i) Excision of mediastinal masses/tumours
- (ii) Tracheal Resection/Repair

Chest Wall Surgery

- (i) Excision of Rib tumours
- (ii) Excision of sternal tumours
- (iii) Repairs of chest wall deformities eg. pectus excavatum/pectus cavatum

PLASTIC AND RECONSTRUCTIVE SURGERY

Free Vascularised Tissue Transfer with microsurgical vascular and or neuro anastomosis of soft or bony tissue.

Head and neck Malignancy with excision, immediate reconstruction and with or without Radical neck Dissection.

Total and Sub-total Reconstructive Rhinoplasty

Severe and facial Trauma needing major reconstruction

Reconstruction for Microtia (absent ear or presence of part of the ear)

Scalp

- (i) Excision of benign or malign lesions with flap rearrangement

Orbit

- (i) Loss of lid or lids with reconstruction
- (ii) Enlargement of palpebral fissure
- (iii) Epicanthus or telecanthus correction (very severe)
- (iv) Repairs of lachrymal duct
- (v) Dacryo Cysto Rhinostomy
- (vi) coloboma correction (very severe)

Ear

- (i) Repair of ear injury (very severe)
- (ii) Correction of other ear deformities (very severe)

Nose

- (i) Excision of lesion with reconstruction (very severe)
- (ii) Reduction of Rhinoplasty
- (iii) Augmentation Rhinoplasty (with silicone or bone or cartilage)

Mouth

- (i) Lip - excision of lesion with reconstruction (very severe)

Tongue

- (i) Partial glossectomy with radical block - dissection of the neck
- (ii) Total glossectomy with or without neck - dissection
- (iii) Tongue flaps

Oral Cavity

- (i) Malignant lesions with reconstruction

Head and Neck Malignancy

- (ii) Excision including bone and reconstruction

Mandible

- (i) Removal of Adamantinoma
- (ii) Cyst Removal (very severe)

Reconstruction of facial fractures (very severe)

Reconstruction of facial Injury (soft tissue only)(very severe)

Reduction of Fibrous Dysplasia

Repair of Tracheo - Cutaneous fistula

Burns

- (i) Primary treatment (very severe)
- (ii) Treatment of sequelae (very severe) eg. release of contractures and joints.

Trunk

- (i) Breast
 - (a) Augmentation (with prosthesis)
 - (b) Reduction
 - (c) Ptosis correction
- (ii) Myo and Osteo Myo Cutaneous flaps
- (iii) Rib Graft Removal

Extremities

- (i) Hand - Reconstruction with soft and or bony injuries (very severe)
- (ii) Repair of Syndactyly - congenital or acquired (very severe)
- (iii) Tendon and neurovascular bundle repair
- (iv) Tenolysis and tenodesis (very severe)
- (v) Pollicisation
- (vi) Thumb reconstruction
- (vii) Lymphoedema operation

Urogenital

- (i) Reconstruction of Hypospadias (very severe)
- (ii) Reconstruction of Epispadias
- (iii) Fistula repair (very severe)
- (iv) Bladder Reconstruction
- (v) Vaginal Reconstruction
- (vi) Radical Vulvectomy
- (vii) Reconstruction of Congenital Short urethra

Skin Conditions

- (i) Reconstructive surgery of Trichoepithelioma (very severe)
- (ii) Reconstructive surgery of Epidermal naevus (very severe)
- (iii) Reconstructive surgery of Naevi (including congenital or giant hairy naevus) (very severe)
- (iv) Reconstructive surgery of Malignant Melanoma (very severe)
- (v) Reconstructive surgery of Squamous cell carcinoma (very severe)
- (vi) Reconstructive surgery of Basal cell carcinoma (very severe)
- (vii) Reconstructive surgery of Neurofibromatosis (very severe)
- (viii) Scar revision (very severe)
- (ix) Rhytidectomy
- (x) Abdominoplasty
- (xi) Dermo-Lipectomy
- (xii) Tattoo-Removal (very severe)
- (xiii) Keloids - excision injection or compression (very severe)

Vascular Malformations

- (i) Reconstructive surgery of Haemangioma (very severe)
- (ii) Reconstructive surgery of Lymphangioma (very severe)
- (iii) Reconstructive surgery of Lymphohaemangioma
- (iv) Reconstructive surgery of AV Malformation (very severe)
- (v) Reconstructive surgery of AV Fistula (very severe)

Implants

- (i) Silastic implants
 - (a) preshaped (very severe)
 - (b) for shaping (very severe)

OPERATION TYPE C

General Surgery

Appendicectomy
Diagnostic laparotomy
Herniorrhaphy-umbilical, inguinal, femoral, diaphragm
Fistulectomy
Colostomy, jejunostomy, ileostomy
Gastrostomy
Excision of umbilical sinus
Arterio-venous shunts
Removal of submandibular gland
Orchiopexy/exploration

Urology and Nephrology

Ureterolithotomy
Vesicolithotomy
Vesicolithopaxy
Trans urethral resection of stricture
Trans urethral resection of bladder neck
Trans urethral resection of bladder tumour
AV shunts
AV fistula
AV fistula utilising bovine graft
Epididymectomy
Orchidopexy

Gynaecology

Ventral suspensions - sling operation
Ectopic pregnancy

Ophthalmology

Cataract extraction, intracapsular and extracapsular
Repair of eyelid deformities
Extraction of dislocated/subluxed lens
Discission
Paracentesis
Excision of orbital or ocular tumours
Iridectomy: peripheral or optical
Cryopexy as prophylaxis against retinal detachment and glaucoma
Evisceration
Enucleation
Ectropion or Entropion correction
Tarsorrhaphy
Repair of severe lacerations of eyelids and/or region around eyes
Pterygium surgery
Excision surgery
Release of Symblepharon/mucous membrane graft
Repair of lachrymal puncta or canalicular obstruction
Repair of moderate perforating injury of eyeball
Laser Coagulation

Otorhinolaryngology

Operations on Mastoid

Surgery of Meatal atresia

Myringoplasty alone

Excision of Preauricular sinus

Decompression of facial nerve

Flap repair of Post auricular sinus

Excision of pinna - Total

- Partial

Reduction of facial fractures

Submucous resection of nasal septum (SMR)

Septoplasty

Nasal polypectomy

Sublabial radical antrostomy (CWL)

Surgery of the Pterygopalatine fossa e.g. Ligation of the maxillary artery
Vidian neurectomy

Ligation of the external carotid

Ligation of the ethmoidal vessels

Surgical treatment of blow out fractures

Repair of Oro antral fistula

Transpalatal removal of the postnasal tumours

Surgical treatment of posterior choanal atresia

Adenotonsillectomy

Tonsillectomy

Pharyngotomy and partial pharyngectomy

Surgery of the tonsillar fossa eg. glossopharyngeal neurectomy
Division of the styloid process

Removal of submandibular salivary gland

Excision of Bronchial cysts and fistulas

Laryngofissure operations

Elective Microlaryngeal surgery

Dental

Closed reduction and immobilization of jaw fractures

Elevation of depressed fractures of zygoma

Excision of benign lesions arising from the gingiva

Surgical removal of impacted teeth and unerupted teeth

Periodontal surgery

Removal of root in antrum and closure of oroantral fistula

Surgery of the salivary glands

Traumatic

Crush injuries with repair of tendons and/or nerve

Exploration, toilet and suture for extensive or multiple soft tissue injuries

Close reduction and immobilization of fracture of:

(a) Spine

(b) Femur

(c) Tibia and Fibula

(d) Humerus

(e) Radius and ulna

Close reduction and immobilization of dislocation of:

- (a) Shoulder
- (b) Elbow
- (c) Knee
- (d) Hip
- (e) Ankle

Open reduction of minor fractures with internal fixation.

Open reduction of dislocations

- (a) Metacarpophalangeal
- (b) Inter-phalangeal

Patellectomy or suture of patella

Orthopaedic

Transposition of peripheral nerve

Correction of deformities:

- (i) Club foot
- (ii) Open reduction of congenital dislocation of hip
- (iii) Derotation osteotomy or pelvic osteotomy for dislocation of hip

Operation on tendons

- (i) Secondary or Primary tendon suture
- (ii) Transplantation of tendons
- (iii) Lengthening of tendons

Skull traction

Excision and biopsy of ganglion

skin traction with application of Thomas Splint

Neutral position (Manipulation and plaster of paris following Osteotomies)

Exploration and Synovectomy for Trigger finger

Change of Plaster of Paris

- (i) shoulder spica
- (ii) hip spica
- (iii) mineava jacket

Manipulations under G.A.

Squestrerectomies

Excision and biopsy of popliteal cyst

Bone biopsy or excision of any bone

Exploration and Retinaculotomy for carpal tunnel syndrome

Arthrodesis of :

- (i) Shoulder
- (ii) Hip
- (iii) Knee
- (iv) Ankle
- (v) Wrist

Neurosurgery

Elevation of depressed fracture of skull

Ligation of Carotid artery

Ventriculo-arterial shunt

Ventriculo-Peritoneal shunt

Exploration, repair or stripping of peripheral nerves

subtemporal decompression

Section of transverse carpal arctarsal ligaments

Cardiology

Close Heart Surgery

(i) Patent Ductus Arteriosus Ligation/Division

Other Cardio Vascular Surgery

(i) Insertion of New Pacemakers - Endocardial lead

(ii) Replacement of pacemaker unit

(iii) Adjustment of pacemaker wire (transvenous)

(iv) Replacement of Pacemaker wire (endocardial)

(v) Pericardial drainage

(vi) Pericardial biopsy

(vii) Vascular embolectomy

(viii) Insertion/Removal of Intra-aortic Balloon

Pulmonary Surgery

(i) Anterior mediastinoscopy

(ii) Open Lung Biopsy

(iii) Pleurodesis

(iv) Diagnostic Thoracotomy

Esophageal Surgery

(i) Palliative Intubation

(ii) Exploratory thoracotomy

Mediastinal Surgery

(i) Anterior mediastinoscopy

Chest Wall Surgery

(i) Sternal/Chest wall resuture

Plastic and Reconstructive Surgery

Scalp

(i) Excision of benign or Malignant lesions (a) with primary closure

(ii) Burns with flap closure (severe)

(iii) Burns with skin grafts (severe)

Orbit

(i) Repair of lid injury (severe)

(ii) Lid resection for tumour with/without reconstruction (severe)

(iii) Tarsorrhaphy (severe)

(iv) Exenteration of orbit

(v) Epicanthus or telecanthus correction (severe)

(vi) Blepharoplasty

(vii) Oriental Eyelid Correction

(viii) Canthoplasty

(ix) Ectropion and Entropion Correction

(x) Coloboma correction (severe)

Ear

(i) Repair of ear injury (very severe)

(ii) Excision of lesion and reconstruction (severe)

(iii) Pat Ears correction

(iv) Correction of other ear deformities (severe)

Nose

(i) Excision of lesion with reconstruction (severe)

Mouth

(i) Lip - excision of lesion with primary closure (severe)

(ii) Commissure reconstruction

(iii) Leukoplakia excision and grafting (severe)

Repair of Clefts

- (i) Cleft lip (unilateral and Bilateral)
- (ii) Cleft Palate
- (iii) Facial Clefts
- (iv) Pharyngoplasty

Repair of Facial Palsy

- (i) Facial sling
- (ii) Muscle transfer of sling
- (iii) Gold weight
- (iv) Facial Nerve Repair

Tongue

- (i) Partial glossectomy

Oral Cavity

- (i) Benign or malignant lesions excision with primary closure
- Reconstruction of Facial Fractures (severe)
Reconstruction of Facial Injury (soft tissue only)(severe)

Burns

- (i) Primary treatment (very severe)
- (ii) Treatment of sequelae (very severe) eg. release of contractures and joints.

Trunk

- (i) Nipple Reconstruction

Extremities

- (i) Hand - Reconstruction with soft and or bony injuries (severe)
- (ii) Reconstructive surgery of Syndactyly congenital or acquired (severe)
- (iii) Tendon and Tenodesis (severe)
- (iv) Carpal tunnel decompression
- (v) Repair Mallet finger
- (vi) Excision of ganglion
- (vii) Synovectomy (severe)
- (viii) Soft tissue release (severe)
- (ix) Muscle transfer (severe)

Grafts

- (i) Split skin grafts (severe)
- (ii) Full thickness grafts (severe)
- (iii) Bony or cartilage grafts (severe)

Urogenital

- (i) Reconstruction of Hypospadias (severe)
- (ii) Excision of stricture
- (iii) Fistula repair (severe)
- (iv) Vaginal dilatation

Skin Conditions

- (i) Reconstructive surgery of Trichoepithelioma (severe)
- (ii) Reconstructive surgery of Epidermal naevus (severe)
- (iii) Reconstructive surgery of Naevi (including congenital or giant hairy naevus) (severe)
- (iv) Reconstructive surgery of Malignant Melanoma (severe)
- (v) Reconstructive surgery of squamous cell carcinoma (severe)
- (vi) Reconstructive surgery of Basal cell carcinoma (severe)
- (vii) Reconstructive surgery of Neurofibromatosis (severe)
- (viii) Dermabrasion (severe)

- (ix) Scar revision (severe)
- (x) Taloo Removal (severe)
- (xi) Keloids - excision injection or compression (very severe)

Vascular Malformations

- (i) Reconstructive surgery of Haemangioma (severe)
- (ii) Reconstructive surgery of Lymphangioma (severe)
- (iii) Reconstructive surgery of AV Malformation (severe)
- (iv) Reconstructive surgery of AV Fistula (severe)

Implants

- (i) Silastic implants
 - (a) preshaped (severe)
 - (b) for shaping (severe)

OPERATION TYPE 0

GENERAL SURGERY

Hemiotomy
 Fissurectomy
 Haemorrhoidectomy
 Local excision of breast tumour/cystic
 Stripping of Varicose Veins
 Injection of Oesophageal Varices/sclerotherapy
 Thiersch's wiring for rectal prolapse
 Excision operation for varicocele
 Relieve of haemo/Pneumo thorax
 Gastroscopy
 Colonoscopy
 Endoscopic Retrograde cholangio-Pancreatography

GYNACCOLOGY

Abdominal sterilization. Minilaparotomy
 Laparoscopy

OPHTHALMOLOGY

Incision and curettage of chalazion
 Excision of granulomas
 Removal of corneal or conjunctival foreign body
 Catholysis/epilation of trichiasis
 Repair of minor lacerations of eyelids and/or region around the eyes
 Syringing/probing of lachrymal apparatus
 Repair of minor perforating injury of eyeball

OTORHINOLARYNGOLOGY

Myringotomy with or without insertion of grommet
 Intranasal antrostomies
 Examination under anaesthesia of Post Nasal space and Biopsy
 partial turbinectomy
 Adenoidectomy
 Drainage of Retropharyngeal and parapharyngeal abscess
 Oesophagoscopy
 Bronchoscopy and Biopsy
 Intranasal polypectomy for single polyp
 Trephine drainage of frontal sinus

DENTAL

Repair of orofacial lacerations

Excision of mucous extravasation cyst

Extraoral incision and drainage of abscess

Enucleation or marsupialization of cysts of the jaw under local anaesthesia

TRAUMATIC

Close reductions and immobilizations of:

(a) Colles Fracture

(b) Fractures of the carpus, metacarpals, tarsus, metatarsals and phalanges

(c) Fractures of the clavicle

(d) Fractures of the scapula

(e) Pott's fracture

Removal of foreign bodies e.g. needles and splinters etc.

Toilet and suture of fingers of hand not involving tendons or nerves

Amputation of fingers and toes

Aspirations of joints, e.g. knee, elbow, ankle etc.

ORTHOPAEDIC

Insertion of Steinmann's pin

Close tenotomies

Arthrodesis of:

(a) Toe

(b) Finger

Release operation of contractures of fingers

NEUROSURGERY

Burr holes

Ventriculography

Excision of skull tumours

CARDIOLOGY

Pulmonary Surgery

(i) Bronchoscopy (Rigid/Fiberoptic)

(ii) Mediastinoscopy (Suprasternal route)

(iii) Scalene Node Biopsy

(iv) Pleural Aspiration/Biopsy

Esophageal Surgery

(i) Esophagoscopy (Rigid/Fiberoptic)

Mediastinal Surgery

(i) Mediastinoscopy (Suprasternal route)

(ii) Tracheal Dilatation

PLASTIC AND RECONSTRUCTIVE SURGERY

Scalp

(i) Excision of benign or malignant lesions (a) with primary closure (moderate)

Orbit

(i) Repair of lid injury (Moderate)

(ii) Tarsorrhaphy (Moderate)

Ear

- (i) Repair of ear injury (Moderate)
- (ii) Excision of lesion and reconstruction (Moderate)

Nose

- (i) Excision of lesion with reconstruction (Moderate)

Mouth

- (i) Lip - excision of lesion with primary closure (Moderate)
- (ii) Leukoplakia excision and grafting (Moderate)

Mandible

- (i) Cyst Removal

Reconstruction of Facial Fracture (Moderate)

Burns

- (i) Primary treatment (Moderate)
- (ii) Treatment of sequelae (Moderate) eg. release of contractures and joints.

Extremities

- (i) Soft tissue release (Moderate)

Grafts

- (i) Split skin grafts (Moderate)

Skin Conditions

- (i) Reconstructive surgery of Trichoepithelioma (Moderate)
- (ii) Reconstructive surgery of Epidermal naevus (Moderate)
- (iii) Reconstructive surgery of Naevi (including congenital or giant hairy naevus) (Moderate)
- (iv) Reconstructive surgery of squamous cells carcinoma (Moderate)
- (v) Reconstructive surgery of Basal Cell carcinoma (Moderate)
- (vi) Reconstructive surgery of Neurofibromatosis (Moderate)
- (vii) Dermabrasion (Moderate)
- (viii) Scar revision (Moderate)
- (ix) Tattoo Removal (Moderate)
- (x) Keloids - excision injection or compression (Moderate)

Vascular Malformations

- (i) Reconstructive surgery of Haemangioma (Moderate)

Miscellaneous

- (i) Secondary suturing (Moderate)
- (ii) Hypertonic saline injections (Moderate)

OPERATION TYPE E

General Surgery

Drainage of perianal abscess/ischio-rectal abscess

Liver biopsy

Insertion of Celestin's Tube

Injection of Haemorrhoids/varicose veins

Vasectomy

Anal Sphincterotomy

Anal Dilatation

Oesophageal Dilatation

Toilet and suture of deep wounds

Infiltrations

UROLOGY AND NEPHROLOGY

Dilatation
Cystoscopic examination/biopsy
Cystoscopic examination and retrograde pyelogram
Micturating Cystourethrogram
Renal biopsy

GYNAECOLOGY

D & C
Cauterisation
Insufflation

OPHTHALMOLOGY

Carbolisation or other cauterisation of corneal ulcer

Otorhinolaryngology

Removal of foreign bodies from the ear, nose and throat
Examination of the ear under microscope (esp. for aural toilet and diagnosis)
Aural polypectomies and Biopsies
Submucous diathermy of nasal turbinates
Drainage of paratonsillar abscess
Per oral removal of the salivary calculus
Drainage of mastoid abscess
Cryotherapy treatment of superficial angiomas (e.g. nose, tongue)
Tracheostomy

DENTAL

Intraoral incision and drainage
Incision biopsy
Alveolectomy, excision of frenum
Apicectomy
Surgical removal of roots
Cervical lymph node biopsy

ORTHOPAEDIC

Wedge resection of toe or finger nails
Excision biopsy of small cysts and tumours
Avulsion of finger or toe nails
Change of Plaster of Paris
(i) P.O.P. Slab
(ii) "U" Slab
(iii) Dorsal Slab
(iv) Colles plaster
(v) Above elbow plaster
(vi) P.O.P. Cylinder
(vii) P.O.P. Boot

NEUROSUPGERY

Infra or supra-orbital nerve avulsion
Intra-alveolar nerve avulsion
Application of skull tongs

PLASTIC AND RECONSTRUCTIVE SURGERY

Orbit

- (i) Repair of lid injury (Mild)

Ear

- (i) Repair of ear injury (Mild)
- (ii) Excision of lesion and reconstruction (Mild)

Nose

- (i) Excision of lesion without reconstruction

Mouth

- (i) Lip - excision of lesion with primary closure (Mild)
- Reconstruction of facial Injury (Soft tissue)(Mild)

Node Biopsy

Burns

- (i) Primary treatment (Mild)

Skin Conditions

- (i) Reconstructive surgery of Epidermal naevus (Mild)
- (ii) Reconstructive surgery of Sebaceous Cyst
- (iii) Reconstructive surgery of Nevus (including congenital or giant hairy naevus) (Mild)
- (iv) Dermabrasion (Mild)
- (v) Scar revision (Mild)
- (vi) Tattoo Removal (Mild)
- (vii) Keloids - excision injection or compression (Mild)

Vascular Malformations

- (i) Reconstructive surgery of Haemangioma (Mild)

Miscellaneous

- (i) Secondary suturing (Mild)
- (ii) Hypertonic saline injections (Mild)

OPERATION TYPE E

General Surgery

Excision/biopsy of lumps, lymphnodes/glands, warts papilloma
Release of imperforate anal membrane

Urology and Nephrology

Circumcision

Gynaecology

Cervical biopsy

Ophthalmology

Epilation/incision of styes

Release of tarsorrhaphy

Removal of conjunctival concretions

Otorhinolaryngology

Antral washouts

Division of tongue tie

Punch biopsies from nasal and oropharyngeal tumours

Dermatology

Electrosurgery

Miscellaneous

Toilet and suture of superficial wounds

Incision and drainage of abscess

Excision of slough (at first episode)

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