

PEDIATRIC SERVICES OPERATIONAL POLICY



Medical Development Division,
Ministry of Health Malaysia

MOH/P/PAK/175.08 (BP)



PAEDIATRIC SERVICES

Ministry of Health Malaysia

OPERATIONAL POLICY

The Operational Policy for Paediatric Services
was prepared by
the Paediatricians of the Ministry of Health Malaysia,
in collaboration with
The Medical Services Development Section,
Medical Development Division, Ministry of Health Malaysia

Published in January 2012

A catalogue record of this document is available from the Library and Resource Unit of the Institute of Medical Research, Ministry of Health;

MOH/P/PAK/175.08 (BP)

And also available from the National Library of Malaysia;

ISBN 983-3433-53-7

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ISBN 983-3433-53-7

ISBN 978-983-3433-53-7



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Glossary

ADR	= <i>Adverse events</i>
AOR	= <i>At Own Risk</i>
ASA	= <i>Classification - American Society of Anesthesiologists</i>
ASD	= <i>Atrial Septal Defect</i>
BAER	= <i>Brainstem Auditory Evoked Responses</i>
CAPD	= <i>Continuous Ambulatory Peritoneal Dialysis</i>
CICU	= <i>Cardiothoracic Intensive Care Unit</i>
CME	= <i>Continuous Medical Education</i>
CPAP	= <i>Continuous Positive Airway Pressure</i>
CPD	= <i>Continuous Professional Development</i>
CPG	= <i>Clinical Practice Guidelines</i>
CPR	= <i>Cardiopulmonary Resuscitation</i>
CSSD	= <i>Central Sterile Supply Department</i>
CT	= <i>Computed Tomography</i>
CXR	= <i>Chest X-ray</i>
DCU	= <i>Day Care Unit</i>
DG	= <i>Director General of Health Malaysia</i>
DMSA Scan	= <i>Technetium Dimercaptosuccinic Acid Scan</i>
DTPA Scan	= <i>Diethylenetriamine Pentaacetate Scan</i>
ECG	= <i>Electrocardiogram</i>
EEG	= <i>Electroencephalogram</i>
EMG	= <i>Electromyogram</i>
ENT	= <i>Ear, Nose and Throat</i>
EPO	= <i>Erythropoietin</i>
GA	= <i>General Anesthesia</i>
GN	= <i>Glomerulonephritis</i>
HD	= <i>Hemodialysis</i>
HFOV	= <i>High Frequency Oscillatory Ventilation</i>
HIDA SCAN	= <i>Hepatobiliary Iminodiacetic Acid Scan</i>
HIE	= <i>Hypoxic-Ischemic Encephalopathy</i>
HKL	= <i>Hospital Kuala Lumpur</i>
IC	= <i>Identity card</i>

IC	=	<i>In-charge</i>
ICD 10	=	<i>10th International Classification of Diseases</i>
ICU	=	<i>Intensive Care Unit</i>
IT	=	<i>Information Technology</i>
IVU	=	<i>Intravenous Urogram</i>
KKM	=	<i>Kementerian Kesihatan Malaysia</i>
MCU	=	<i>Micturating Cysto-Urethrogram</i>
MO	=	<i>Medical Officer</i>
MOH	=	<i>Ministry of Health</i>
MRI	=	<i>Magnetic Resonance Imaging</i>
MVA	=	<i>Motor Vehicle Accident</i>
NIBP	=	<i>Non Invasive Blood Pressure</i>
NICU	=	<i>Neonatal Intensive Care Unit</i>
PD	=	<i>Peritoneal Dialysis</i>
PDA	=	<i>Patent Ductus Arteriosus</i>
PET	=	<i>Peritoneal Equilibration Test</i>
PICU	=	<i>Paediatric Intensive Care Unit</i>
POMR	=	<i>Perioperative Mortality Review</i>
QA	=	<i>Quality Assurance</i>
QI	=	<i>Quality Improvement</i>
SCAN	=	<i>Suspected Child Abuse and Neglect</i>
SCN	=	<i>Special Care Nursery</i>
SIDS	=	<i>Sudden Infant Death Syndrome</i>
SPPD	=	<i>Sistem Pengurusan Pesakit Dalam</i>
SSEP	=	<i>Somatosensory Evoked Potential</i>
TOF	=	<i>Tetralogy of Fallot</i>
TPHA	=	<i>Treponema Pallidum Haemagglutination</i>
URTI	=	<i>Upper Respiratory Tract Infection</i>
VDRL	=	<i>Venereal Disease Research Laboratory</i>
VSD	=	<i>Ventricular Septal Defect</i>

FOREWORD BY

DIRECTOR GENERAL OF HEALTH MALAYSIA



The Ministry of Health is committed to providing timely, safe, quality care of the highest standard that is accessible to all. This is also what the public rightfully expects when they present themselves to a health facility.

For many years now we have seen a steady improvement in our health care delivery through investment in manpower and structural development. However there are still gaps in service provision that need new approaches.

One of the challenges in health care delivery is consistency of performance throughout the system. Many initiatives have been launched to address this problem, one of which is to create a departmental operational policy. This policy should provide the foundation upon which high quality care is delivered by each and every component of the delivery process.

The paediatric services address a particularly vulnerable segment of the population where there is little margin for error. Parents of sick children expect health care workers to be competent and caring and the facilities adequate to address the needs of the children and their families during such stressful periods.

Our population also increasingly expects full disclosure when consenting to procedures and evidence that those performing such procedures are competent. A well documented policy that has specific sections addressing family rights, infection control, staff qualification and monitoring of medication usage will go a long way in promoting a safe and efficient health care delivery system.

A departmental operating policy that is applicable to all levels of hospitalized care will also help to reduce the discrepancies between departments and hospitals ensuring equitable access to good health care for the different sections of the population.

Malaysia has made enviable progress in the indices of child health since Independence. However, most of this was brought about by innovations in primary care. Now as we endeavour to achieve developed nation status, the remaining gaps in improving child health indices will have to be addressed by improvements in secondary and tertiary care. I hope that the implementation of this operational policy will help achieve this goal.

[Handwritten signature of Dato' Sri Dr. Hossan bin Abdul Rahman]
Dato' Sri Dr. Hossan bin Abdul Rahman
Director General of Health Malaysia

FOREWORD BY NATIONAL ADVISOR OF PAEDIATRIC SERVICES



During the pediatric annual heads of department meeting in 2007 a draft version of the pediatric operational policy was presented. This document had separate sections for the various subspeciality services in addition to a central core for all the services. After some deliberation it was decided that a single generic document that addresses the basic needs of child health at all levels should be used as the basis of the pediatric services within the Ministry of Health.

This document has been purposely designed to address the requirement for accreditation by international quality agencies such as the Joint Commission International. This is in line with decision of the Ministry that all government hospitals should be accredited.

The primary concern of all doctors is the safety and well being of their patients. Children should benefit from their contact with the health services and this contact should be as pleasant as possible for the whole family. Hence the issue of patient safety and full disclosure for all procedures has to be addressed in a systematic fashion. This extends to verifying the competency of their carers and the design of in patient facilities.

We have included a section on staffing and equipment norms. This is meant to help central agencies when they plan to expand or introduce pediatric services. It is envisaged that over time all pediatric facilities will achieve these norms.

This document is designed to be a guide. Individual departments and subspeciality units may have to modify some sections to address specific needs and are encouraged to do so.

I would like to thank all the pediatricians who have worked hard to produce this document and we all hope it will be truly beneficial to the children and their families.

A handwritten signature in black ink, appearing to read 'Hussain Imam bin Hj Muhammad Ismail'.

Hussain Imam bin Hj Muhammad Ismail
National Advisor of Paediatric Services
Ministry of Health, Malaysia

VISION

That all children be able to enjoy the highest attainable standard of health through access to facilities for the promotion of wellness; prevention and treatment of illness; and rehabilitation of health.

MISSION

The paediatric medical department shall:

- provide quality healthcare which is effective, appropriate, timely and responsive to the needs of the patient, family, and community by a team of trained, committed, caring and innovative personnel.
- work with parents and the community as partners in the care of the children and promotion of wellness.

OBJECTIVES

To provide quality care incorporating aspects of promotive, preventive, diagnostic, curative and rehabilitative care which is child and family friendly to all children up to 18 years of age.

SCOPE OF SERVICES

1. To provide health and medical services to children from birth to 18 years of age which include:
 - a. In-patient paediatric medical services.
 - b. Specialist out-patient paediatric medical services.
 - c. Paediatric medical ambulatory care.
 - d. Community and outreach paediatric medical services.
 - e. Immunisation for missed opportunities.
2. Training of doctors, nurses and allied health personnel in general paediatrics and paediatric medical subspecialties.
3. Advocacy role for issues related to child and adolescent health.
4. Quality improvement activities, health systems and clinical research.

The depth and breadth of the services provided by each Paediatric Department depends on whether it is in a national, regional, state or district hospital.

COMPONENTS

1. Wards
2. Clinics
3. Ambulatory care centre
4. Intensive care units
5. Subspeciality units

ORGANISATION

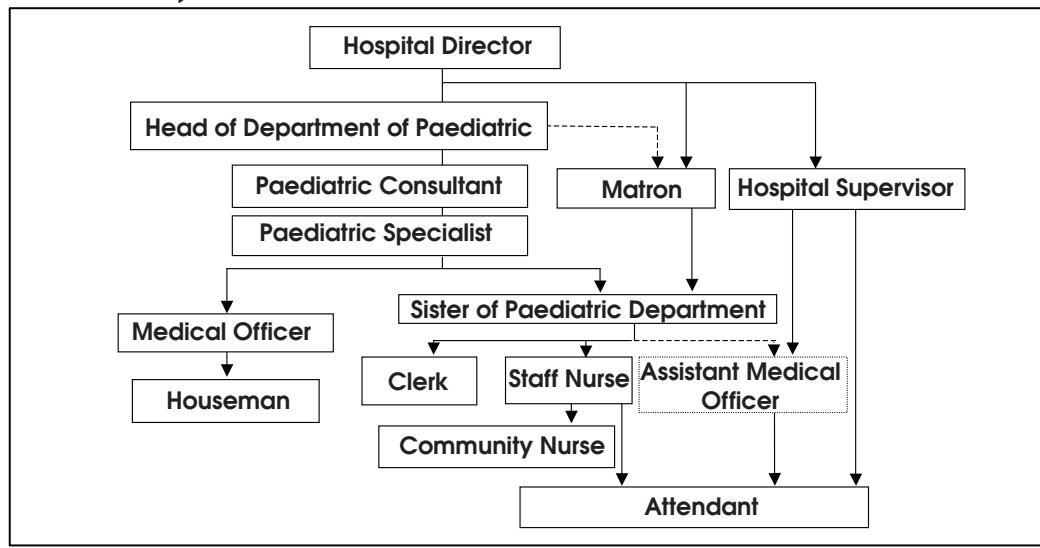
The organisation will depend on the level of care provided by the paediatric department.

- The national centre shall be headed by a senior consultant paediatrician appointed by the MOH and assisted by the various heads of the Medical Paediatric subspecialty units.
- Paediatric departments in regional, state and district hospital shall be headed by a Paediatrician.

The number of committees shall depend on the complexity of the department. There shall be personnel appointed to look into infection control, quality improvement activities, continuous professional development, lactation management and house-officer and junior medical officer training.

The organisational chart of the Paediatric Department is as follows:

Organisation Chart for the Department of Paediatrics (not strictly hierarchical)



OPERATIONAL POLICIES

The operational policies that follow was prepared in accordance to the *Joint Commission International (JCI) Accreditation Standards For Hospitals* which came into effect on January 2008.

The main purpose of a health care organisation is patient care.

Children and adolescents are admitted to receive in-patient care or registered to receive outpatient services depending on their health care needs and the organisation's mission and resources.

1.0 PATIENT SAFETY GOALS

1.1 PATIENT IDENTIFICATION

- a. Patient shall be identified by two identifiers.
- b. For inpatients, identification tag with the patient's name and registration number shall be affixed to the patient's limb.
- c. For outpatients, identification is by patient's name and Identity Card number of the patient (Mykid) or mother.

1.2 EFFECTIVE COMMUNICATION AMONG CARE-GIVERS

- a. Verbal and telephone communication including laboratory results and orders shall be written down by the receiver in the patient's case-notes, read back by the receiver and confirmed to be accurate by the informer.

1.3 REDUCE RISK OF HOSPITAL-ASSOCIATED INFECTIONS

- a. For infection control, please refer to the following:
 - *Policy And Procedure Of Infection And Antibiotic Control, MOH 2002*
 - *Disinfection And Sterilization Policy And Practice, MOH 4th Edition 2002 (MOH/P/PAK/79.04 (HB)*
 - *Hand Hygiene Handbook, MOH 2006*
 - *Critical Care Medicine Section Statement on Infection Control Measure In The ICU, MOH 2004*
 - *Pocket Guidelines For Standard Precautions, MOH 2nd Edition 2005, ISBN 983-42556-2-4*

- *Management Of Clinical And Related Wastes In Hospital And Healthcare Establishments, MOH July 1993*
- b. In-patients with serious diseases transmitted by air-borne route shall be nursed in negative pressure isolations with hepafilter.

1.4

REDUCE PATIENT FALLS

- a. All patient beds/cots shall have side rails on both sides.
- b. Parents and caregivers shall be orientated on the need to have the side rails up at all times when patient is in the bed.
- c. Floors shall be kept dry, and warning signs shall be placed for wet floors.
- d. All falls within the health care facility shall be notified through incident reporting format.
- e. The patient who has fallen shall be thoroughly assessed and managed accordingly.

2.0 ACCESS TO CARE AND CONTINUITY OF CARE

2.1 ADMISSION POLICIES FOR IN-PATIENTS AND OUTPATIENTS

2.1.1 In-patients

- a. Paediatric medical officer/specialist in-charge of the ward shall be informed of all patients prior to their admission to the ward.
- b. Admission to the paediatric ward can be from:
 - The Accident and Emergency Department
 - The paediatric clinic and ambulatory care centre
 - Other wards within the hospital
 - Direct admission from other MOH health facility and private health facilities shall be admitted after consultation with the paediatrician
 - Selected groups of patients under the care of paediatricians with standing instructions for direct admission to the paediatric wards. E.g. oncology patients with febrile neutropenia, transplant recipients, patients with inborn errors of metabolism

- c. Admissions shall be categorized as emergency, semi-emergency, and elective by the responsible receiving doctor.
 - **Emergency:** Immediate threat to patient's life or well-being exists. This situation warrants the highest admitting priority. All reasonable measures are taken to ensure this patient's immediate admission, including the transfer or discharge of another less ill patient.
 - **Semi-emergency:** Undue or prolonged delay in admission might threaten the patient's life or well-being. The patient normally shall be admitted within twenty-four (24) hours.
 - **Elective:** The health of the patient is not endangered by delayed admission. Such patients are usually scheduled in advance of admission. In consideration of the patient, the Hospital will make every effort to accommodate this patient's desired date of admission.
- d. When no bed space is available to admit patients, or to admit patients to the appropriate unit, efforts shall be made to transfer the patient to another available facility as soon as possible.
 - There shall be net-working within a designated geographical area on the availability of intensive care/ subspeciality beds.
 - In hospitals without specialists, it is the responsibility of the receiving institution/hospital with specialist to find the relevant bed space.
- e. Registration of admissions shall be done at the Registration Counter of the hospital. However, ill patients from other health care facilities may be transferred directly to the ward, and the admission formalities attended to subsequently.
- f. For other issues related to patient admissions, please refer to the general admission policies of the hospital.
- g. The condition of the patient, proposed care, expected outcome of that care and cost of care shall be explained to the patient and family by the doctor in charge.

Operational Policy, Paediatric Services

- The parents/guardian of a critically ill patient shall be informed immediately of the patient's condition by the medical officer/specialist. This shall be documented in the patient's record.
- If the parents/guardian are not within the hospital and are not contactable by telephone, the police shall be enlisted in locating them.

h. The parent/guardian of the patient shall be orientated on the facilities available in the ward. They shall be briefed about safety precautions particularly bedside rails. They shall be made aware of the rules and regulations of the hospital e.g. no smoking within the hospital premise, and visiting hours.

i. Physical, language and cultural barriers to care shall be reduced by:-

- Having signage in Bahasa Malaysia and English including any internationally recognized symbols.
- Having printed material in Bahasa Malaysia, Chinese, Tamil, English and other common language of the region.

j. Admission or transfer to and from units providing intensive or specialized care is determined by the policies set up by the various units. (refer to documents of NICU, PICU, and other subspeciality services).

- Decision to transfer is done after consultation with the appropriate specialist in charge.
- The criteria for these patients to be transferred to and from these units shall be documented in their case notes.

2.1.2 Outpatients

- a. The Paediatric Specialist Outpatient Clinic shall operate during office hours according to the clinic schedule.
- b. Patients shall be seen at Paediatric Specialist Clinic by appointment.
- c. Referrals to the clinic shall be from medical practitioners except for urgent cases from MOH health centres without medical officers.

- d. Patients shall be seen within 90 minutes from the time of appointment or registration (whichever is later). To facilitate this, patients shall be given staggered appointments.
- e. Patients' weight and height shall be taken before consultation.
- f. Patient blood samples shall only be taken by trained paediatric staff.

2.2 CONTINUITY OF CARE

- a. The responsible specialist in charge shall be clearly identified during the patient's care. The responsible specialist is the specialist directing and coordinating the medical care of a child admitted to an in-patient unit, or in the paediatric specialist clinic.
- b. When a patient attends to the Hospital for a test or procedure that involves material risk with or without sedation, there shall be a clearly identified responsible specialist during the peri-procedure period. Thus, any physician, surgeon, radiologist, anaesthesiologist, etc., who undertakes a procedure involving material risk, becomes the responsible specialist and will remain so during the perioperative period. This perioperative time includes the time when the patient enters the treatment area until he/she leaves the recovery area.
- c. If the patient is referred for a procedure to a different hospital, a formal transfer procedure must take place to a new responsible specialist. The receiving responsible specialist (or delegate) must be willing to deal with issues of assessment, follow up and post procedure complications. This responsible specialist must also facilitate admission to hospital should this be necessary.
- d. Patients 16 -18 years of age who require continuing medical care shall be prepared for transfer of care to adult services. A transition clinic shall be operational and shall be staffed jointly by an adolescent physician or paediatrician and adult physician.

2.3 DISCHARGE, REFERRAL AND FOLLOW-UP

- a. The patient's discharge criteria shall be based on the patient's health status and the social aspects of the family.
- b. Decision for discharge shall be made by the medical officer/specialist.
- c. Decision for discharge shall be made early so that arrangements for transport and the continuing health needs of the patient can be made.
- d. A discharge summary shall be written containing the following particulars:
 - reason for admission,
 - significant physical findings,
 - diagnoses (according to ICD10) and co-morbidities,
 - diagnostic and therapeutic procedures,
 - medications given during ward stay,
 - patient's condition at time of discharge,
 - discharge medications and
 - follow-up instructions.
- e. Copies of the discharge summary shall be :-
 - kept in the patient's case notes,
 - given to the referring practitioner and
 - given to the practitioner responsible for the continuing care of the patient.
- f. Discharge care plan
 - Ensure that intravenous lines are removed before discharge
 - Ensure prescription for medication is ready and answer queries regarding medication
 - Instructions as to the need for follow-up care, the date, time and location of the follow-up and where urgent care can be obtained shall be given
 - Patients who have not received or updated their immunisation shall receive the relevant immunisation prior to discharge

- The discharge forms shall be duly signed by parents and the discharge slip given to them. The identity of parent/guardian claiming the child on discharge shall be checked and recorded
- g. The parent/guardian wishing to take their child/ward out of the hospital despite medical contraindication may do so after adequate counseling by medical personnel. This is not applicable to medico-legal cases. This shall be documented in the patient's case notes including the signature of the parents/guardian.
- h. The parents/guardian shall be informed immediately of a patient's death by the medical officer/specialist. If the parents/guardian are not within the hospital and are not contactable by telephone, the police shall be enlisted in locating them.
- i. The deceased shall be sent to the mortuary at the end of an hour in designated trolleys or bassinets by the mortuary staff.
- j. The police shall be informed of any patients found missing, after all efforts to trace the patient in the ward and the hospital grounds has failed. The patient shall be considered to have absconded if he/she has not returned to the ward within 24 hours.
- k. **Referral To Other Departments/ Hospitals**
All referrals shall be in accordance with existing guideline in each hospital.
 - In hospitals with specialists, the decision to refer to another department or institution/hospital shall be made by the specialist in charge.
 - Agreement of the patient/guardian to transfer shall be documented.
 - Prior consultation with the receiving responsible doctor shall be made.
 - The receiving responsible doctor must agree to accept the patient before the patient is transferred.
 - The referral letter shall contain the reason for admission, significant physical findings, diagnoses (according to ICD10) and co-morbidities, diagnostic and therapeutic procedures, medications, and patient's condition at time of transfer.

- All relevant diagnostic images shall be made available to the receiving hospital.
- The patient may be referred back to the referring doctor for follow-up. A reply to the referring doctor shall be provided, with the necessary information and management plan to enable the doctor to continue subsequent management of the patient.

I. Transportation

- The responsible referring specialist shall determine the mode of transportation of the patient.
- The responsible referring specialist shall determine the appropriate qualification of the staff member and equipment during transfer according to the condition and status of the patient.
- The following shall be documented in the patients records :-
 - (i) names of the referring and accepting doctor
 - (ii) reason for transfer
 - (iii) patient's condition during transfer and arrival including resuscitation and medication given
 - (iv) vital signs during transport shall be duly recorded in the relevant form.

3.0 PATIENT AND FAMILY RIGHTS

- 3.1 Parents/guardian and patients shall be given appropriate information to encourage and permit them to participate in the care given. They shall receive updates regularly and whenever the condition of their child changes. All information shall be given in a language they can understand in as simple a manner as possible.
- 3.2 *The Baby Friendly and Child Friendly Policy* shall be in practice. The mothers shall be encouraged to room in.
- 3.3 A carer shall be allowed to be with the child at all times. However, it is preferable that female carers be with the child after 10 pm. Beds shall be provided for their night stay.

- 3.4 Home leave is not allowed under Ministry of Health's policy. Should the parents request to take the child home, the child shall be discharged and readmitted later if the need arise.
- 3.5 Patients requiring isolation shall be nursed in isolation rooms.
- 3.6 The institution shall be respectful of the patient/carer's personal values and beliefs.
- 3.7 Patient's need for privacy shall be respected during clinical interviews, examinations, procedures/treatments, and transport.
- 3.8 Parents shall be requested to send their non-essential valuables home. The hospital shall provide a secure area for storage of essential valuables.
- 3.9 Patients shall receive appropriate protection while in the hospital Refer to policy on Infant Safety (*Pekeliling KPK Bil 1/2007-Garispanduan Sistem Kawalan Keselamatan Bayi di Hospital-hospital KKM*).
- 3.10 Visitors under 12 years are not allowed to visit patients in the Special Care Nursery, Intensive care areas, High dependency ward and patients suffering from infectious diseases.
- 3.11 **Consent**
Standard: Patient informed consent is obtained through a process defined by the organization and carried out by trained staff.
 - a. As a general guide, the following types of procedures shall require a signed consent form:
 - surgical procedure
 - general anesthesia
 - satellite anesthesia
 - invasive radiology procedures
 - blood transfusion
 - other high risk and/or invasive treatments
 - for other treatments the consent discussion may be documented in the patient's case notes.
 - b. The consent shall be taken by the responsible specialist or his assistant carrying out the procedure. The information provided

includes:

- Patient's condition
- Proposed treatment
- Potential benefits and risks
- Possible alternatives
- Likelihood of success
- Possible problems related to recovery
- Possible results of non-treatment

- c. Consent shall be obtained from the patient if he/she is at least 18 years of age or from the legal guardian for those less than 18 years.
- d. In a live-threatening emergency, where consent cannot be obtained, medical treatment immediately necessary to save life or avoid significant deterioration in the patient's health shall still be provided. Patient's family shall be informed what has been done, and why as soon as possible.
- e. In other emergencies and after all efforts to trace relatives and next of kin have failed, the Hospital Director and/or the Head of Department shall authorise for the procedure to be carried out. The health care professional shall document the efforts made to obtain consent from the patient's legal guardian.
- f. Consent shall only be obtained over the telephone as a last resort. If the guardian is unable to come to the hospital or in the case of procedures that do not require a signed consent, consent can be obtained over the telephone. Another health practitioner shall witness the verbal telephone consent. The person giving consent shall be told that another health practitioner, including their name and position, is on the phone to witness the consent. The health practitioner who obtains the consent must document the process in the progress note, including the date and time the consent was given and the name and signature of the witness.

3.12 Research

Refer to circular on research - *NIH Guidelines for Conducting Research in the MOH Institutions & Facilities 5 Sept 2007*

3.13 Organ Donation

Refer to National Organ, Tissue and Cell Transplantation Policy MOH/P/PAK/131.07(BP) published in June 2007 by Medical Development Division

4.0 ASSESSMENT OF PATIENTS

- 4.1 All patients cared for by the organisation shall be categorised into emergency, semi-emergency and elective cases.
 - a. Emergency cases admitted to the ward shall be assessed by the Medical Officer immediately.
 - b. Semi-emergency cases admitted shall be assessed by the house officer and/or medical officer within one hour of admission to the ward.
 - c. Elective cases admitted shall be seen within 2 hours of admission to the ward.
- 4.2 The assessment of patients shall be documented in the designated clerking forms comprising of a full medical history including developmental history and immunization status; physical examination and evaluation of growth, nutritional, psychological, socio-economic and emotional status.
- 4.3 All patients admitted shall be seen by the specialist within 24 hours of their hospitalization in a facility with at least 2 paediatricians.
- 4.4 After assessment of the patient, the responsible medical officer/specialist shall decide on the most appropriate setting/level of care of the patient.
- 4.5 Victims of abuse and neglect shall be managed according to the standard operating procedure for SCAN (Suspected Child Abuse and Neglect)
- 4.6 Nursing assessment shall be documented in the patient's case notes.
- 4.7 In-patients shall be reviewed at least once a day. Ill patients shall be reviewed as required by the severity of the condition.
- 4.8 All monitoring of patients, re-assessment, management and progress of patients shall be recorded in the patient's case notes.

5.0 CARE OF PATIENTS

- 5.1 All paediatric patients shall have access to appropriate care regardless of ability to pay.
- 5.2 All paediatric patients shall have access to appropriate care regardless of time of the day or day of the week.
- 5.3 There shall be provision of 24-hour in-patient care by medical officer on-site and 24 hour specialist cover.
- 5.4 There shall be provision of 24-hour in-patient nursing care on shift basis.
- 5.5 Emergency care for paediatric outpatients shall be provided by the Emergency department.
- 5.6 There shall be a process to integrate and coordinate care.
 - a. There shall be a responsible specialist for each patient who will plan, coordinate, and integrate the care of the patient.
 - b. All plans, discussion, results and conclusions with other departments relating to the care of the patient shall be documented in the patient's case-notes.
 - c. There shall be a single integrated medical record for each patient.
- 5.7 Patients and parents/guardian shall be informed about the patient's ongoing status, care plans and outcome of treatment including unanticipated outcome and this shall be documented in the patient's notes. All information shall be given in a language they can understand in as simple a manner as possible
- 5.8 On medical records :-
 - a. The following health care personnel who have direct care of the patient shall document in writing in the patient's case-notes:
 - medical practitioners
 - nurses
 - allied health staff
 - medical social worker

- b. The notes shall be organised as per hospital policy and shall include:
 - Patient identification data
 - Date and time
 - Clinical history and examination
 - Investigations and results
 - Treatment given
 - Procedures undertaken and indications
 - Follow-up notes and consultation
 - Communication with the patient, his relatives, other doctors, other authorities, etc.
 - Signature and full name in block letters or rubber stamp.
- c. Case summaries shall be completed and case notes dispatched to the Medical Records Department within 3 working days from the day of discharge.
- d. Patients' medical records and prior investigation results shall be made available at the time of consultation in the paediatric specialist clinic and during re-admission.
- e. Medical reports shall be prepared and dispatched to the Medical Records Department within 14 days. For cases where the primary medical officer is not available, another medical officer in the department shall be assigned to prepare the report.
- f. For other policies please refer to policy on medical records – *Pekeliling KPK Bil. 3/2005 Garispanduan Rekod Perubatan Bagi Hospital-Hospital Kementerian Kesihatan 2 Mac 2005)*

5.9 Care of high-risk patients and provision of high-risk services.

Refer to:

- a. *Guidelines for the Rational Use of Blood and Blood Products 2007, National Blood Centre, MOH*
- b. *Standard Operating Procedure For Potential Infectious Disease, 1st Edition, 2004, MOH/K/EPI/41.04(HB), ISBN 983-41870-0-9, published by Communicable Disease Surveillance Section, Disease Control Division MOH*

- c. *Guidelines For The Hospital Management of Child Abuse and Neglect MOH/P/PAK/130.07(GU) published in June 2009 by Medical Development Division.*

5.10 Food And Nutrition

- a. All patients shall be supplied with at least four meals a day. Dietary guidelines produced by the Ministry of Health shall be complied with.
- b. Specific attention shall be paid to the quality of food provided for children, with special emphasis on the nutritional value, and cultural, religious and individual preferences.
- c. Code of ethics for milk formula of the MOH shall be adhered to.
- d. For infants who are not breast fed, ready-to-feed formula is recommended. Alternatively formula milk can be prepared and supplied from a dedicated milk kitchen in glass bottles.
- e. Food shall be supplied for the mother/carer accompanying the child.
- f. Patients with special nutritional requirements shall be co-managed with the dietitian for planning, delivery and monitoring of the nutritional therapy.

5.11 Management of Pain and End-of-life Care

Reference shall be made to the document on :-

- a. *Pain Management prepared by the Malaysian Society of Anaesthesiologist and Malaysian Association for the Study of Pain 2004.*
- b. *End Of Life Issues And Management In Perinatal Care Manual.*
- c. *Clinical Practice Guidelines on Withholding and Withdrawing of Life Support in Children 2005.*
- d. *Pekeliling KPK Bil. 9 Tahun 2008, Pelaksanaan Tahap Kesakitan Sebagai Tanda Vital Kelima (Pain As Fifth Vital Sign) di Hospital-hospital KKM*

6.0 SEDATION

The Healthcare facility shall take steps to minimise physical and emotional pain, trauma and distress to children undergoing procedures.

- 6.1 Pain control plans shall be individualised to the child and to his/her family and prepared in collaboration with them. Cultural issues with respect to the meaning and treatment of pain shall be known and respected. Non-pharmacological strategies for pain control shall supplement the use of analgesic and sedative drugs.
- 6.2 Invasive procedures shall be undertaken only when clinically necessary in the best interest of the child, and, except in an emergency, only with prior consent of the parent or guardian. Every effort shall be made to ensure that children are accompanied and supported by a parent.

7.0 MEDICATION MANAGEMENT AND USE

- 7.1 Drugs prescribed shall be in accordance to approved list of drugs of Ministry of Health. Drugs outside this list require prior approval of the Director General of Health.
- 7.2 All prescriptions shall be written by medical practitioners in their generic names and in block letters. The prescription shall contain the name, registration number/IC, age/weight and diagnosis of the patient; the dose, route and frequency of the medication and the signature, date and name of the prescriber with the official rubber stamp.
- 7.3 All medications ordered shall be recorded by the medical practitioner in the treatment chart and the patient's case-notes. There shall be no transcription of any prescription.
- 7.4 Right medications shall be administered by qualified individuals in the right dose to the right patient at the right time by the right route.
- 7.5 Only medical practitioners, medical assistants and state registered nurses shall administer medications.

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- 7.6 The right patient shall be identified by 2 identifiers - name and registration number or IC in compliance with the Pekeliling KPK Bil. 3/2005 Garispanduan Rekod Perubatan Bagi Hospital-hospital KKM.
- 7.7 All medications served shall be signed in the medication chart after serving by the staff concerned.
- 7.8 Dangerous drugs prescribed and administered shall be in accordance to the Dangerous Drugs Act 1969. These drugs shall be checked by two qualified staff before serving to patients. The balance of any unused dangerous drugs shall be labeled and returned to the pharmacist.
- 7.9 The patient shall be monitored for response and adverse events. Adverse events (ADR) and lack of expected response shall be documented and reported to the National Pharmaceutical Control Bureau (Biro Pengawalan Farmaseutikal Kebangsaan).
- 7.10 Allergies to medications shall be documented clearly in the space provided in the patient's records. Allergy cards shall be provided to the patients.
- 7.11 Medication errors shall be reported using the critical incident monitoring form within 24 hours and an analysis of the error and remedial measures taken as soon as possible.
- 7.12 Medications brought into the hospital by the patient shall be made known to the medical staff and the medication, time, route and dose taken documented in the patient's records. These medications shall be served by the nursing staff during the patient's stay in the ward.
- 7.13 Medications stored in the emergency trolley shall be:-
 - a. Standardised throughout the paediatric units of MOH hospitals for the neonatal and paediatric wards.
 - b. Checked at least once daily and replenished after use by the staff nurse in charge. Expired or damaged medications shall be replaced.
- 7.14 All medication samples shall be kept in the pharmacy and a list of these medications informed to the department. Use of these medications

shall follow the indication and category as stipulated in the MOH drug formulary. Use of medication samples not within the MOH drug formulary requires approval from the Director General of Health Malaysia.

- 7.15 Total parenteral nutrition shall be available regardless of the day of the week or public holidays.
- 7.16 For other policies on medication management including purchasing, storage, thefts and losses, etc, refer to policies set by pharmacy services.

8.0 PATIENT AND FAMILY EDUCATION

- 8.1 The educational needs of the patient and family shall be assessed in accordance with the primary and co-morbid condition.
- 8.2 Information on common specific conditions shall be made available to patients and family in the form of written materials, audiovisual aids and patient/parent support group by staff with the relevant knowledge and communication skills.
- 8.3 Patient and family shall be educated by the pharmacist, medical practitioner and nursing staff on the correct use of medications including the dilution and administration of drugs, potential interactions with other drugs and food, and side effects.
- 8.4 Patient and family shall be educated by the pharmacist, medical practitioner and nursing staff on the correct use, maintenance, trouble shooting of the medical device.
- 8.5 Patient and family shall be educated by the medical practitioner, dietitian and nursing staff on the nutritional needs of the patient.
- 8.6 The family of patients who need rehabilitation shall be educated on the availability of both institution-based and community based rehabilitation, as well as rehabilitation techniques that can be carried out at home.

9.0 QUALITY IMPROVEMENT AND PATIENT SAFETY

- 9.1 There shall be a coordinator or committee formed to look into quality improvement and patient safety.
- 9.2 A Quality Assurance (QA) secretariat shall be formed at each hospital to provide technological and other support.
- 9.3 The Quality Improvement (QI) activities for the department are as provided by the manual on QI activities of the MOH at national, hospital and department level.
- 9.4 QI and patient safety information e.g. critical incidents that have happened shall be communicated to all relevant staff on regular basis.
- 9.5 Training in QI activities shall be conducted at least once a year :-
 - a. The organization shall analyse all the QI activities and implement changes accordingly to improve patient safety and delivery of care.
 - b. Clinical practice guidelines and clinical pathways shall be developed and applied so that standardization of care is provided. For those conditions without clinical practice guidelines, the latest edition of the Paediatric Protocols for Malaysian Hospitals, Ministry of Health shall be used.
 - c. The ward shall maintain a record of critical incidents and sentinel events. These incidents/events shall be notified to the Head of Department and the QI coordinator within 24 hours. Root cause analysis shall be carried out and remedial action shall be taken to prevent or reduce the risk of such events occurring including re-designing the processes of the organization.

10.0 PREVENTION AND CONTROL OF INFECTIONS

- 10.1 There shall be an infection control sub-committee in paediatric departments with ICUs.
- 10.2 The hospital director shall ensure that the infection control unit has adequate staffing, IT equipment and other resources needed to support the infection control activities.
- 10.3 The hospital infection control committee coordinates the infection control activities involving training, surveillance and reporting.
 - a. Staff shall be orientated to the policies, procedures and practices of the infection, prevention and control program including new policies and procedures from time to time.
 - b. Staff shall be trained in the management of patients with infectious disease including barrier nursing, wearing and removal of personal protective equipment and hand hygiene.
 - c. The infection control unit shall track the prevalence of multi-resistant organisms (refer to *Consensus Guidelines For The Management Of Infections By ESBL-Producing Bacteria, 2001*).
- 10.4 Patients with suspected contagious disease shall be isolated in accordance to *Policy And Procedure Of Infection And Antibiotic Control, MOH 2002* including the use of negative pressure room with hepafilter.
- 10.5 All notifiable diseases shall be notified to the Health Office through the Medical Records Department. Urgent notification for certain notifiable diseases shall be notified by telephone to the Health Office.
- 10.6 Immunisation shall be offered to paediatric staff not immune to chickenpox, hepatitis B and rubella.
- 10.7 Needle stick injuries shall be reported and managed according to MOH guidelines. Use of needle free devices shall be encouraged (refer to *Pekeliling KPK Bil. 3/2007 Pelaksanaan Program Survelan Kecederaan Oleh Alatan Tajam*).
- 10.8 The infection control programme shall be carried in accordance with the following guidelines and policies. These programmes aim to reduce

the risk of health care associated infections in patients, staff and other workers and visitors in all areas in the paediatric department.

- a. *Policy And Procedure Of Infection And Antibiotic Control, MOH 2002*
- b. *Disinfection And Sterilization Policy And Practice, MOH. 4th Edition 2002*
- c. *Hand Hygiene Handbook, MOH 2006*
- d. *Critical Care Medicine Section Statement on Infection Control Measure In The ICU, 2004.*
- e. *Pocket Guidelines For Standard Precautions, MOH 2nd Edition, 2005, ISBN 983-42556-2-4*
- f. *Management of clinical and related wastes in hospital and healthcare establishments, MOH July 1993*
- g. *Pekeliling KPK Bil. 1/2006 Keperluan Melaporkan Kejadian Wabak Penyakit Berjangkit*

11.0 FACILITY MANAGEMENT AND SAFETY

- 11.1 All facilities catering to the needs of paediatric patients shall have the following features:
 - a. A play area with toys and educational material appropriate to various age groups.
 - b. A suitable area for children with special needs.
 - c. A separate waiting area for adolescents in the paediatric specialist clinic.
 - d. *The Baby Friendly Policy* shall be in practice. Breast feeding facilities shall be made available for mothers
 - e. A nappy change room, and toilets with child toilet adaptor seats and high and low sited sinks shall be provided.
 - f. Hot water will not be supplied to mothers to prepare at the bedside to avoid accidents. A pantry shall be provided for parents/carers to prepare milk and other hot drinks.
 - g. Disabled friendly.
- 11.2 All staff shall be trained about their role in the security and fire safety.

11.3 Medical equipment

- a. Planned preventive maintenance of all equipment shall be carried out as planned by the concessionaires.
- b. The staff is trained to operate medical equipment and utility systems.

12.0 STAFF QUALIFICATIONS AND EDUCATION

12.1 The MOH shall define the desired education, skills, knowledge and other requirements of all staff members.

- a. Each staff member's responsibilities are defined in a current job description.
- a. The knowledge and skills of each staff member shall be consistent with patient needs.
- c. Each category of staff shall present his/her credentials on joining the department.
- d. The hospital/department shall then privilege the staff to practice appropriate to his credentials and the available facilities.
- e. Annual evaluation of the individual staff skills, knowledge and attitude shall be carried out in accordance with the evaluation exercise established by the Public Services Department.
- f. Continuing Professional Development (CPD) activities is compulsory in all categories of staff. Each staff shall keep a record of his/her CPD activities for the year.
- g. Personnel information shall be kept for each staff member.
This shall include:
 - personal details
 - copies of their qualifications
 - annual practicing certificates for doctors and nursing and allied health staff.
 - work experience
 - Continuous Professional Development (CPD) activities
 - Results of Evaluations (Sasaran Kerja Tahunan)

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- h. The staffing plan for the department shall be reviewed and updated based on workload, areas of need and new medical advances and technology.
- i. All clinical and non-clinical staff is oriented to the organization, department and unit to which they are assigned and to specific job responsibilities.
 - A general orientation shall be provided to the staff at the hospital level.
 - A specific orientation as to the job responsibility of his/her position shall be provided at the department/unit level.
 - Students and Volunteers shall be oriented to the organization particularly in terms of patient safety and infection prevention and control.
 - Documentation of this orientation exercise shall be kept.
- j. Doctors, nurses and other paramedics involved in providing patient care are trained in resuscitation techniques – Paediatric Advanced Life Support (PALS) or Advanced Paediatric Life Support and Neonatal Resuscitation Program (NRP).
- k. Staff health and safety shall be under of Occupational Staff Health and Safety. Refer to *Guide to Notification of Occupational Accidents Among Health Workers and Occupational Diseases Including Poisonings*, published by Occupational Health Unit, MOH 2001

12.2 Medical Staff

- a. Each doctor shall present his/her credentials on joining the department. This shall include:
 - Personal details, including photograph
 - Certified copies of their qualifications
 - Full Malaysian Medical Council registration (except house officers)
 - Latest Annual Practicing Certificate (except house officers)
 - Work experience
- b. The clinical privileges given to each specialist by the hospital privileging committee to practice independently shall be consistent with the credentials, training and experience and performance of the specialist and facilities available in the hospital.

c. Clinical privileges given to medical officers shall depend on previous training, experience and performance in paediatrics and this shall be spelt out in the job description.

- All medical officers shall undergo a probationary period during which they shall receive the required level of supervision and evaluation of necessary skills, knowledge and desired work behaviours.
- A log book shall be maintained of the Medical officers training, and experience and the performance evaluated by the supervisor.
- The log book shall be used as a guide for granting further clinical privileges.

12.3 Nursing Staff

a. Each nurse shall present her credentials on joining the department. This shall include:

- Personal details, including photograph
- Certified copies of their qualifications
- Full nursing board registration
- Latest Annual Practicing Certificate
- Work experience

b. The clinical privileges given to each nurse by the hospital privileging committee shall be consistent with the credentials, training and experience and performance of the nurse and facilities available in the hospital.

c. The nursing staff of the paediatric and neonatal wards shall have post-basic paediatric or neonatal nursing qualifications. Clinical privileges shall be given to nurses with post basic qualification after 6 months of completion of post basic training

d. For those without post-basic qualification, they shall be supervised for 2 years under a mentor-mentee programme and their performance logged in. Clinical privileges shall then be given to them on satisfactory completion of training.

e. All nurses shall obtain at least 30 credit points for renewal of their Annual Practicing Certificate.

- f. All nurses posted to paediatric or neonatal wards shall undergo in-patient training for serving of medications and intravenous fluids.

13.0 MANAGEMENT OF COMMUNICATION AND INFORMATION

- 13.1 Communication between staff members in the department shall be effective and timely by means of regular meetings, emails, memos and personal telephone calls or contact.
- 13.2 Confidentiality shall be maintained at all times when communicating about patients and their families.
- 13.3 For other policies, please refer to hospital general policies.

OPERATIONAL POLICIES SPECIFIC TO SUB-SPECIALTIES



PAEDIATRIC NEPHROLOGY UNIT POLICIES

1. OBJECTIVES

To provide preventive, diagnostic, curative and rehabilitative services that are appropriate, effective, and efficient to all children and adolescents with kidney diseases.

2. SCOPE OF SERVICES

The paediatric nephrology unit shall provide the following:

2.1 Tertiary care for all children and adolescents up to 18 years of age with kidney and related diseases which consist of the following:

- a. In-patient care
- b. Ambulatory and Out-patient Care
- c. Renal transplantation
- d. Acute dialysis
- e. Chronic dialysis – haemodialysis and chronic peritoneal dialysis
- f. Consultations by telephones, fax etc.

2.2 Advocacy role for issues related to kidney health and kidney disease in children.

2.3 Training of medical officers and nurses/ paramedics in basic aspects of paediatric nephrology.

2.4 Training of paediatric nephrologists.

2.5 Research

3. COMPONENTS

The service components in paediatric nephrology comprise the following :-

3.1 Clinics

3.2 In-patient wards

3.3 Peritoneal dialysis unit

3.4 Hemodialysis unit

3.5 Transplant unit

4. ORGANISATION

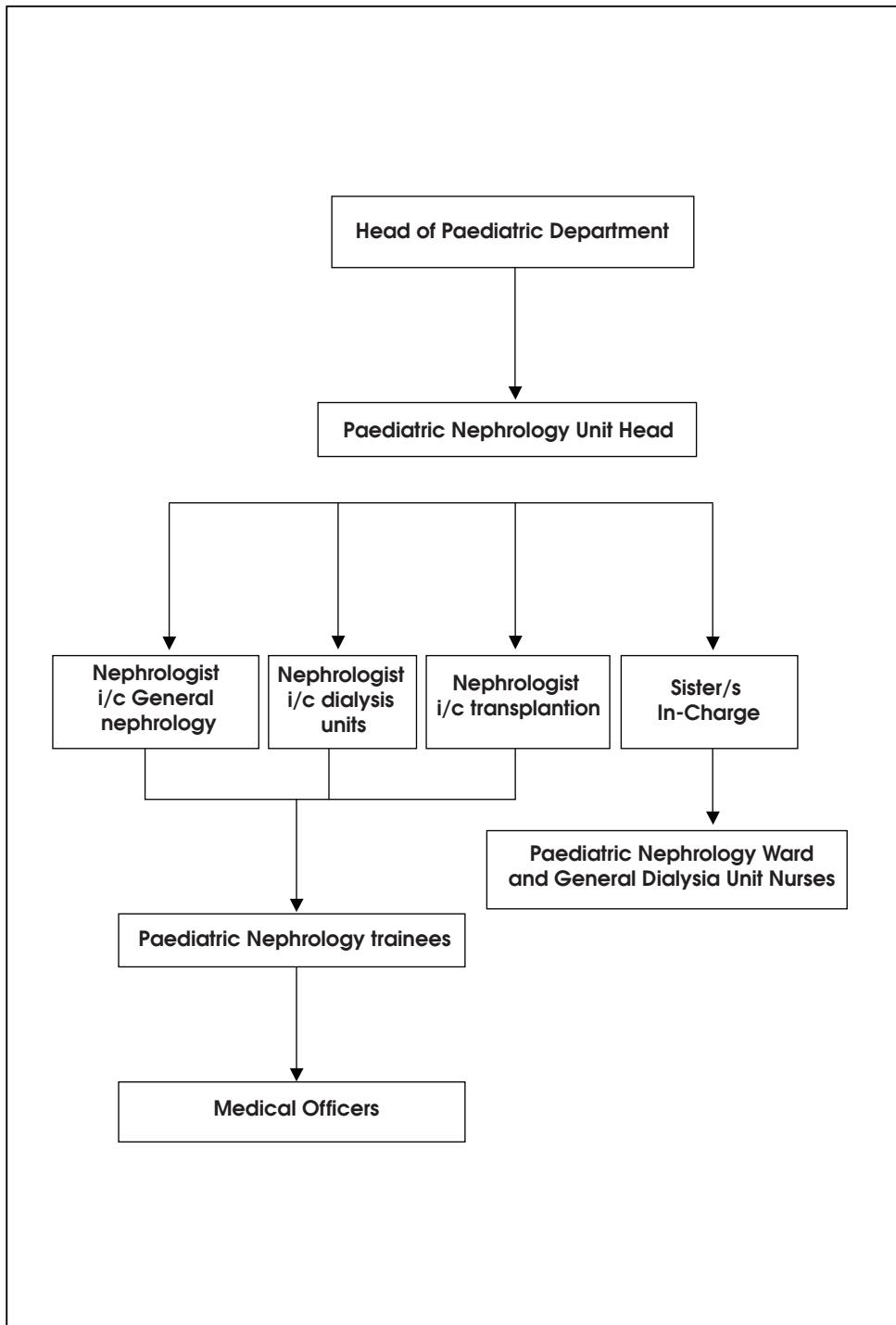
4.1 The unit shall be headed by a unit head.

4.2 The number of consultant paediatric nephrologists will depend on need and availability of personnel. Ideally a unit should have at least 3 consultants.

4.3 The medical officers in the unit will be from the common pool in the paediatric department with some posted from various institutions for further paediatric nephrology training. The number of medical officers in the unit will depend on the availability of medical officers as well as the norm set by the Ministry of Health on specialist to medical officer ratio.

4.4 The unit will be organized into various sections: general nephrology, dialysis and transplant each headed by its own consultant paediatric nephrologist in units with multiple nephrologists

4.5 The organizational chart is as follows:



5. OPERATIONAL POLICIES

5.1 Admission and discharge policies

- a. Admission to paediatric nephrology unit can be:
 - Direct referrals from other hospitals
 - Transfer in from other wards
 - Admission by paediatric nephrology staff from the paediatric specialist clinic
 - Accident and emergency department after consultation with paediatric nephrologist
- b. Registration of admissions – refer to department policies.
- c. Discharge - For general nephrology patients, refer to department general care plan.

5.2 Clinics

- a. Medical officers shall assist in seeing patients in the general nephrology clinics. They are encouraged to discuss all cases seen with the specialist.
- b. HD, PD and transplant patients shall be seen by the specialists. A medical officer may see these patients under the direct supervision of the specialist.
- c. All investigation results shall be reviewed within a week after receipt of the results and action taken if necessary. This may include recall of the patients for clinical review or repeat of laboratory tests. All results should be reviewed and duly signed and dated before they are entered into the patient folder.
- d. Observations and changes in care plan and medications should be penned into the small booklet kept by the patient at each clinical encounter.
- e. Ensure that appointments are given before the patient goes home.

5.2.1 For children on Chronic Peritoneal Dialysis (PD):

- a. First PD clinic appointment - one to two week following completion of training on PD.
- b. At one month - test for PET/Kt/V and creatinine clearance.
- c. Subsequent clinic visits 4 – 8 weekly depending on patient's condition.

- d. Problems in between – walk-in to PD room staffed by a PD nurse from 7 am to 9 pm.
- e. Indenting of consumables – as per unit/pharmacy policy.
- f. Erythropoietin – collected during clinic visits to be transported at 4°C i.e. placed in container with ice.
- g. The PD clinic shall be assisted by a PD nurse.

5.2.2 Hemodialysis (HD) patients

- a. These patients may be seen during their HD sessions or in a separate dialysis clinics.

5.2.3 Transplant patients

- a. New transplant patients shall be seen at least three times per week in the outpatient clinic for first 6 weeks, biweekly for next 6 weeks, weekly clinic visit from month 4-6 post transplant, fortnightly clinic visit from month 7-9 post transplant, 3-4 weekly clinic visit from month 10-12 post transplant, then 1-3 monthly thereafter.
- b. Efforts shall be made to review patients within the same day or the next day of the blood tests being carried out.
- c. Transplant recipients who develop acute medical problems shall be advised to contact the transplant clinic staff to arrange for review by the transplant/nephrology team.

5.3 Referrals

- a. Referrals to paediatric nephrology unit
 - Outpatient elective referral – only with referral letter from medical practitioners and depending on the case mix, the clinics are as follows:
 - (i) General Nephrology Clinic
 - (ii) Urology-Nephrology Combined Clinics
 - (iii) Transplant Clinic
 - (iv) Dialysis Clinics
 - All new cases shall be seen within 6 weeks of referral.
 - Elective in-patient referral – to be seen within one working day
 - Emergency referrals from within the hospital area accepted

and seen as soon as possible by paediatric nephrology Medical Officer On-Call who will then consult the paediatric nephrology specialist on call

- b. Referrals to other units/hospitals Refer to department policies and procedures.
- c. Transition of care to adult nephrology units
 - To ease transition of care from the paediatric unit to the adult unit, ideally the patient should be introduced to the adult nephrologist before he/she is formally transferred to the adult unit if possible.
 - The patient should be stable at the time of transfer.
 - A letter of referral is to be given together with relevant copies of laboratory results and X-rays.

5.4 Peritoneal dialysis (PD) unit

The PD unit should serve the following functions:-

- a. Training of new PD patients and/or their assistants on PD treatment
- b. Facilitate long term treatment requirements including regular issuance of PD prescription and changing of transfer sets.
- c. Provide facilities for outpatients or inpatients to carry out their regular PD exchanges when they require services in the unit e.g. attending outpatient clinic follow up or undergoing investigations/treatment in nephrology or other departments in the hospital.
- d. Obtain results/particulars and maintain records on matters and activities related to PD e.g. culture & sensitivity results from exit site and PD fluids, peritoneal equilibration test (PET), daily PD treatment records, complications (peritonitis, exit site infection, catheter malfunction, catheter leaks etc) and treatment outcome records related to PD patients
- e. Provide counseling service and retraining to prospective, new or regular patients
- f. Assist the ward staff in the management of PD patients admitted to the ward. It is preferred that a PD patient requiring admission to be warded in the nephrology wards to facilitate PD exchange procedures.
- g. Provide relevant data of PD related activities to the National Transplant And Dialysis Registry

5.5 Hemodialysis unit

This unit shall provide long term dialysis treatment to patients with end stage renal failure as well as short term dialysis treatment to children with acute renal failure. Ideally children should be dialysed in paediatric hemodialysis units. However, in many paediatric nephrology units, the very small number of children on hemodialysis is unable to sustain a separate paediatric hemodialysis unit. These children should be cared for by staff in an adult hemodialysis unit familiar with the special needs of children.

- a. All patients should be screened for hepatitis B, hepatitis C and HIV infection on admission in the haemodialysis unit and at least every 6 months.
- b. The haemodialysis unit should follow the policies and practices which include:
 - Haemodialysis staff should wear disposable gloves when caring for patient or touching the patient's equipment at the dialysis station
 - Items taken into the dialysis station should either be disposed of, dedicated for use only on a single patient or disinfected before taken to a common clean area or use on another patient
 - Common medication carts to deliver medications should not be used in the unit
 - Clean area should be clearly designated for preparation, handling and storage of medications and unused supplies and equipment
 - External venous and arterial pressure transducer filter protectors should be used for each patient
 - Dialysis stations should be cleaned and disinfected between patients
- c. Patients with **positive Hepatitis BsAg** should be dialysed separately with separate reuse facilities.
- d. Patients with **positive Hepatitis C Antibody** should be dialysed separately with separate reuse facilities.

- e. The water used for haemodialysis should be treated to achieve standards set by AAMI or equivalent. Regular tests of the quality of water should be carried out.
- f. Should dialysers be re-used, a separate area for the re-processing of dialysers shall be provided with automated re-processors with pressure check and total cell volume measurement.

5.6 Renal Transplantation - Policy on Donor And Recipient

Renal transplantation should be carried out using a kidney from a suitable deceased donor or a live kidney donor. The practice and ethics of transplantation shall be guided by the the latest national policies on organ, tissue and cell transplantation.

- a. Deceased donor kidney transplantation.
In line with general consensus and published criteria, kidneys from deceased donors younger than 18 years will be given to patients who are less than 18 years of age at the time of the availability of the deceased donor kidney. Hence a separate paediatric waiting list will be maintained and will include all dialysis patients who are less than 18 years of age at the time the waiting list is updated. Each centre shall be responsible for maintaining its own transplant waiting list.
- b. Definition of a Live Related Kidney Donor
A live related potential kidney donor can be one of the following:
 - Live Genetically Related Donor
Live related donor implies a blood (genetically) related living family member that donates an organ. This means either a mother, father, sister, brother, half brother, half sister, uncle, aunt, niece, nephew and first cousin of the patient (organ recipient). Other related donors should receive prior approval from the Unrelated Transplant Approval Committee (UTAC).
 - Live Emotionally Related Donor
The emotional relationship is only meant to involve a legally registered spouse donating a kidney to the partner, or legally adopted parents, or siblings.

- Live Unrelated Donor
Potential Donors who are not genetically nor emotionally related to the potential recipient. There is as yet no general acceptance of this type of donor for kidney transplantation in Malaysia.
- c. The work-up of potential live donors, and recipients shall follow the guidelines as published in the latest Renal Replacement Guidelines of the Ministry of Health.

5.7 Documentation of clinical notes.

Refer to department policies and procedures.

Data on new patients and any outcome and annual returns to be submitted for all dialysis and transplant patients to National Renal Registry. Ensure dialysis patients are counseled and placed on transplant waiting list.

5.8 Training and Continuing Medical Education

- a. Paediatric nephrology training

Please refer to document on training of paediatric nephrologist

- b. Medical officers

This will be in the form of active clinical work in all areas of paediatric nephrology and case discussions, weekly tutorials and teaching rounds. At the end of the 3-4 month rotation, the MO should be able to manage general nephrology problems and advise patients and parents on options in renal transplantation.

- c. Nurses

This will be on-the-job training. Ideally all nurses in paediatric nephrology unit should have undergone post-basic paediatric and renal nursing course.

Continued nursing education is encouraged.

5.9 Call duties

The Paediatric nephrology unit may have a medical officer and specialist on call every day to care for all paediatric nephrology in-patients as well as referrals. In smaller units without a separate paediatric nephrology medical officer on-call, the medical officer on-call for general paediatrics is also responsible for the care of paediatric nephrology patients during on-call hours.

a. Duties of paediatric nephrology medical officer on call

- To be available and contactable throughout the whole duration that she/he is on-call.
- Evening rounds on working weekdays, morning and evening rounds on Sundays and public holidays.
- To carry out urgent investigations as required.
- To see all urgent referrals and new admissions.
- To accept referrals from other hospitals after discussion with the nephrology specialist on call.

b. Duties of the paediatric nephrology specialist on call

- To be contactable at all times for consultation by the medical officer on call.
- To accept consultations or referrals from other hospitals.
- To be ever ready to accept deceased donor kidneys at any time.

PAEDIATRIC NEUROLOGY UNIT POLICIES

1. OBJECTIVES

General Objective:-

To provide a holistic and optimum care for children with neurological disorders including neuro-rehabilitation services through a team of dedicated personnel with appropriate equipments, adequate treatment facilities, and an excellent organization system and network.

Specific Objective:-

- 1.1 To provide diagnostic, curative and rehabilitative services that are appropriate, effective, efficient and in a timely manner to children with neurological disorders.
- 1.2 To provide adequate and continuous training, and continuous motivation for its personnel.
- 1.3 To promote good rapport among personnel, patients, family and the community.
- 1.4 To cultivate and strengthen the positive attitudes towards learning and knowledge, quality assurance and community participation.
- 1.5 To conduct good quality research in paediatric neurology.

2. SCOPE OF SERVICES

The Paediatric Neurology unit shall provide the following services:

- 2.1 Secondary and tertiary outpatient and inpatient care for children with neurological disorders.
- 2.2 A full range of paediatric neurophysiological services such as routine and video EEG, EMG, nerve conduction study, VEP, BAER, and SSEP.
- 2.3 Day care treatment for patients who do not warrant admission for skin biopsy, muscle biopsy and intramuscular botulinum toxin injection.
- 2.4 Counselling on paediatric neurology cases.

- 2.5 Training of doctors, nursing staff and other allied health professionals in paediatric neurology and neurorehabilitation.
- 2.6 To play an advocacy role for issues related to paediatric neurology and neurodisabilities.
- 2.7 To provide professional input or participate in support groups for chronic paediatric neurological diseases such as the Malaysian Epilepsy Society, Malaysian Dyslexia Society, Autistic and Association for Spastic Children, Muscular Dystrophy Association and etc.
- 2.8 To conduct research in paediatric neurology.

3. COMPONENTS

The following are the components of Paediatric Neurology services.

3.1 Ward

The Paediatric Neurology in-patient services may be provided in a dedicated paediatric neurology ward or within a designated general paediatric ward or part of a paediatric neuroscience ward together with other related discipline such as paediatric neurosurgery.

3.2 Clinics

The Paediatric Neurology outpatient services are conducted at the general paediatric specialist clinic complex. Some of the combined clinic sessions such as combined Neuro-Nephro clinic, combined cerebral palsy multidisciplinary clinic may be conducted elsewhere in the hospital.

3.3 Day Care Centre

Some day care treatment or procedure may be conducted at the day care centre.

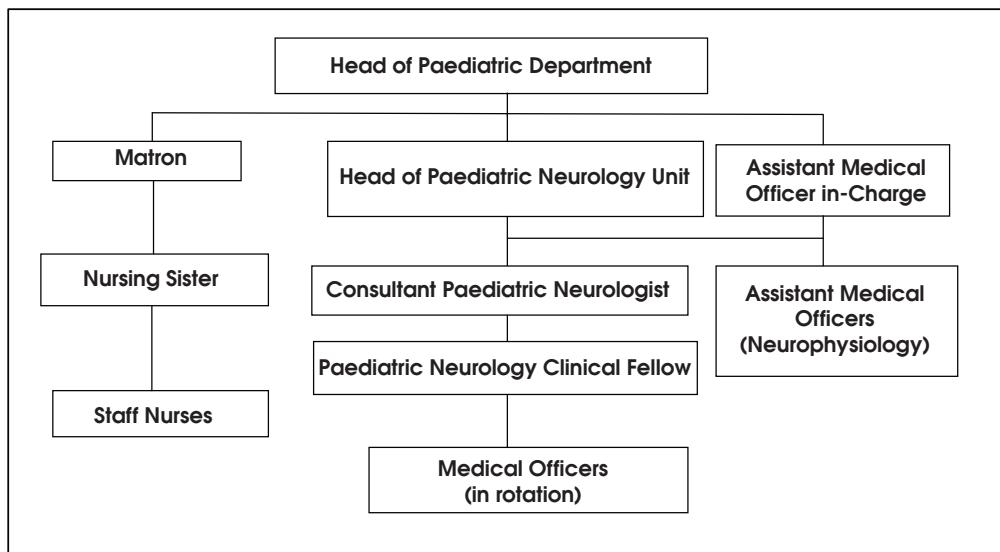
3.4 Paediatric Neurophysiology Laboratory

This facility provide a full range of paediatric neurophysiological services such as routine and video EEG, EMG, nerve conduction study, VEP, BAER and SSEP.

4. ORGANIZATION

The unit shall be headed by a consultant paediatric neurologist appointed by the Ministry Of Health.

Organization Chart of Paediatric Neurology Unit



All the services will be provided during office hours. In-patient after office hour services will be provided by the on-call team of medical officers and specialist. Tele-consultation services is provided by the consultant paediatric neurologist (or on a rotation basis if there are more than one consultant paediatric neurologist) as and when required.

5. OPERATIONAL POLICIES

a. **General - As for General Paediatric Services**

b. **Specific: Paediatric Neurology**

Component 1 : Ward

5.1 Admission Policies

Admission to the Paediatric Neurology ward can be from:-

- a. The general paediatric outpatient clinic at the hospital.
- b. The paediatric neurology clinic.
- c. The accident and emergency department
- d. Direct referrals from other hospitals or wards.

The Paediatric Neurology ward shall receive admission everyday during the office hours. If after office hours, admission will be to the designated general paediatric ward.

5.2 Referrals

Referral to the Paediatric Neurology unit

- a. In general, referrals can come from any medical practitioners.
- b. The unit specialist and doctors will arrange to see the patients in the Paediatric Neurology clinic on a scheduled appointment.
- c. Emergency cases shall be seen at the Emergency Department and admitted to the paediatric ward if necessary.
- d. Direct admission shall be arranged directly with the unit specialist.
- e. The patient, after treatment either as an outpatient or inpatient, may be referred back to the referring doctor for follow-up. A reply letter and / or a small note book (to be kept by the parents) to the referring doctor should be provided, with the necessary information and management plan to enable the referring doctors to continue subsequent management of the patient.
- f. For children with epilepsy, an epilepsy diary should be given to the parent.

5.3 Documentation of clinical notes

- a. The Paediatric Neurology unit's specialist should ensure that all doctors in the unit make accurate, comprehensive and legible documentation of clinical notes.

Documentation shall include:

- Patient identification data
- Clinical history and examination
- Investigations and results
- Treatment given
- Procedures undertaken and reasons
- Follow-up notes and consultation

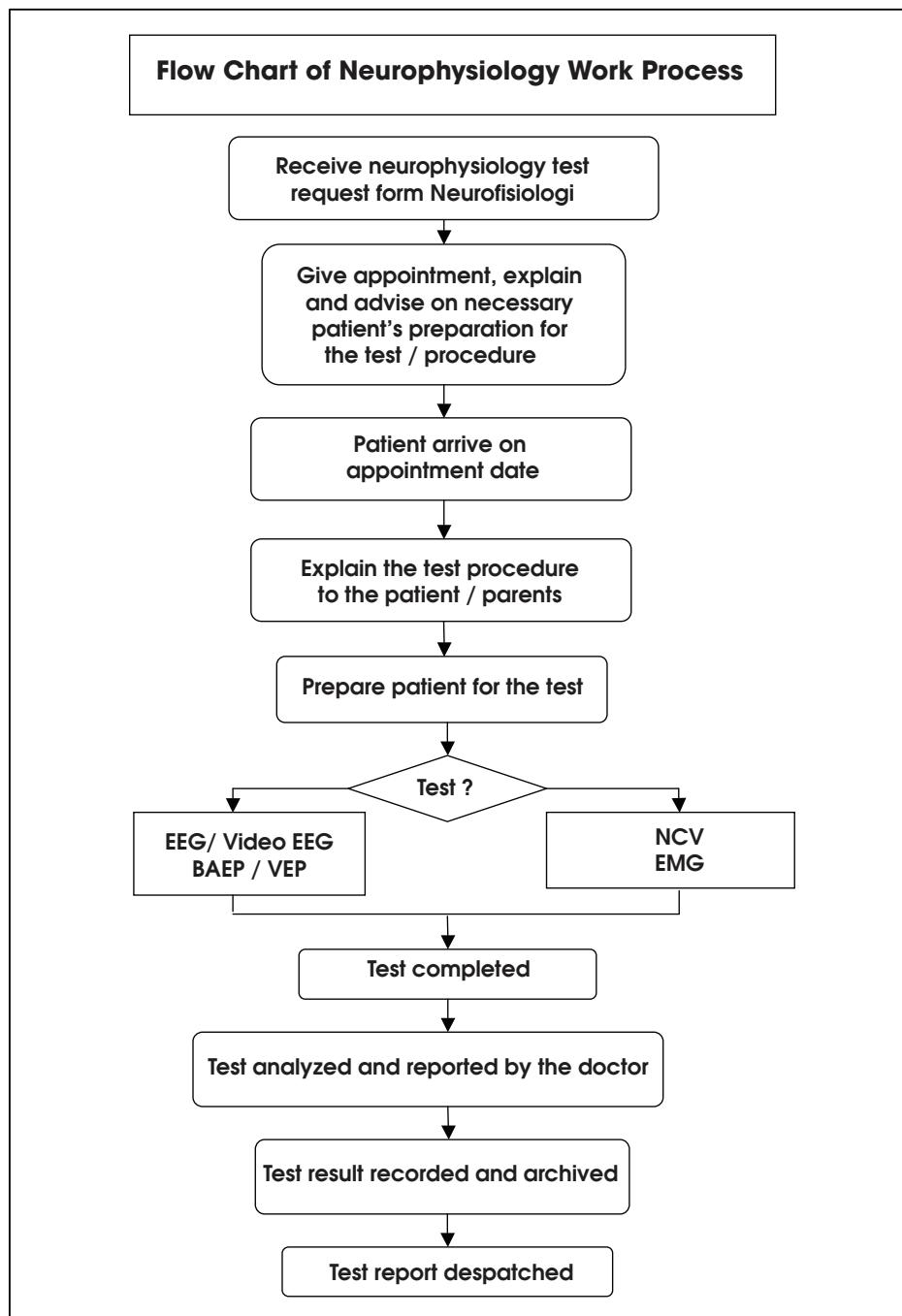
- b. Communication with the patient, his relatives, other doctors, other authorities, etc should also be properly documented.
- c. Case summaries shall be completed and case notes despatched to the Medical Records Department within 3 working days from the day of discharge.
- d. Medical reports shall be prepared and despatched to the Medical Records Department within 30 days from the date of request. For cases where the medical officer treating the patient is not available, another medical officer in the department shall be assigned to prepare the report.

Component 2 and 3 : Clinics and Day Care Treatment

Upon receiving referrals from private clinics / hospital, health care centre or other hospitals, an appointment at the Paediatric Neurology clinic will be scheduled. On the day of appointment, patients will be advised to register themselves at the registration counter of the Paediatric Specialist Clinic. An out-patient card will be given and a waiting number to the appropriate room will be provided.

Component 4: Paediatric Neurophysiology Services

The operational policy of the services.



6. WHOLE HOSPITAL & DEPARTMENTAL POLICY

Relevant aspects of the Paediatric Department Policy and Whole Hospital Policies shall be complied with.

PAEDIATRIC CARDIOLOGY UNIT POLICIES

1. OBJECTIVES

Same as the Paediatric Department

2. SCOPE OF SERVICES

The Paediatric Cardiology Unit shall provide the following:

- 2.1 In-patient care
- 2.2 Out-patient care
- 2.3 Non-invasive cardiac investigations such as transthoracic & transesophageal echocardiography, Holter test, ambulatory BP monitoring and stress ECG
- 2.4 Invasive cardiac procedures such as diagnostic cardiac catheterization, interventional procedures (balloon atrial septostomy, device closure, vessels stenting, valvuloplasty, angioplasty, coil embolization) and transvenous temporary pacemaker implantation, pericardiocentesis
- 2.5 Counseling on cardiovascular disease
- 2.6 Pre and post-operative cardiac assessment for closed and open heart surgery for simple congenital heart diseases (PDA ligation, coarctation repair, BT shunt, ASD and VSD closure, TOF repair, bidirectional Glenn shunt)
- 2.7 Advocacy role for issues related to congenital and acquired heart disease
- 2.8 Training of doctors and nurses on general paediatric cardiology
- 2.9 Research

3. COMPONENTS / LOCATION

- 3.1 Paediatric Cardiology Ward and Adult / Cardiothoracic Ward for adults with congenital heart problems for inpatient care

Operational Policy, Paediatric Services

- 3.2 Paediatric ICU for paediatric cardiac patients who require intensive care
- 3.3 Cardiothoracic ICU (CICU) for care of post-cardiac surgery patients
- 3.4 Neonatal ICU (NICU) and Special Care Nursery (SCN) for neonates born with heart problems
- 3.5 Non-invasive Cardiac Laboratory (NICL) at Cardiac Unit for non-invasive cardiac investigations
- 3.6 Invasive Cardiac Laboratory (ICL) at OT Complexes for invasive cardiac procedures
- 3.7 Paediatric Cardiac Clinic at Cardiac Unit for outpatient service

4. ORGANISATION

The unit is headed by a consultant paediatric cardiologist, with one or two other cardiologists and supported by 1-2 Medical Officers and 2 cardiac technicians.

5. OPERATIONAL POLICIES

5.1 Admission and discharge policies

- a. Admission to the Paediatric Cardiology Ward can be from:
 - Active paediatric clinic
 - Paediatric Cardiology Clinic
 - Paediatric ECHO Clinic
 - Transfer-in from other wards
 - Direct referrals from other hospitals
- b. Receive admission everyday
- c. Registration of admission - please refer Department Policies
- d. Discharge - please refer to the Department General Care Plan
- e. Follow-up: Upon discharge, patient shall be given cardiac or ECHO clinic appointment date

5.2 **Referrals**

Referrals to the Paediatric Cardiology Unit :-

- a. Outpatient elective referrals shall be with referral letter from medical practitioners. The clinic schedules will vary in different hospitals.
- b. In-patient referrals shall be direct consultation with the Paediatric Cardiology Specialist / trainee, Medical Officer, or cardiac nurse for appointment.
- c. Emergency referrals from within hospital shall be direct consultation with Paediatric Cardiology Specialist/ trainee and be seen as soon as possible or within 24 hours.
- d. Emergency referrals from outside hospital shall be direct consultation with the Paediatric Cardiology Specialist / trainee.
- e. Referrals to other units/hospitals: Refer to department policies and procedures.
- f. Referrals to National Heart Institute or other cardiac centres: For patients who need further cardiac catheterization or cardiac surgery, a referral letter shall be given together with relevant copies of ECG and CXR.

5.3 **Out-patient care policies**

- a. Receive referrals from active general paediatric clinic, other subspecialty clinics, day-care, in-patients, health care centres, school health clinics, private clinics and other hospitals.
- b. Patients for ECHO examination shall be registered and admitted to the Day Care Unit for sedation when required.
- c. Staggered-time appointment system for outpatient clinics.

5.4 Documentation of medical records

- a. Refer to department policies and procedures.
- b. All ECHO reports, cardiac catheterisation angiograms and reports shall be systematically documented, filed or archived.

5.5 Training

- a. Paediatric Cardiology Training
- b. Department CME activities

6. WHOLE HOSPITAL & DEPARTMENTAL POLICIES

Relevant aspects of the Paediatric Department Policies and Whole Hospital Policies shall be complied with.

PAEDIATRIC ONCOLOGY UNIT POLICIES

1. OBJECTIVE

To provide diagnostic, curative and rehabilitative services that is appropriate, effective and comfortable to children with malignancies and serious blood disorders.

2. SCOPE OF SERVICE

- 2.1 Provision of facilities for the assessment, diagnosis, treatment, nursing and rehabilitation of children with malignancies and serious blood disorders.
- 2.2 Provision of counseling and health education to children, parents and guardians in an atmosphere which is child and family-friendly.
- 2.3 Provision of facilities for practical training of paramedics, medical students and post-graduates as well as in-service training for staff.
- 2.4 Provision of 24 hours service.

3. ORGANISATION

A Consultant Paediatric Haematologist-Oncologist shall be in charge of the unit at any one time and shall be assisted by the other Paediatric Haematologist-Oncologists, Specialists, Medical Officers, the ward Sister and staff nurses. The ward Sister in charge shall be responsible for the day-to-day management of the ward.

4. POLICY DESCRIPTION

- 4.1 For ordinary admissions, patients shall be registered through the admission room. In-patients from other wards may be transferred to the oncology ward upon discussion and approval from the Paediatric oncologist. Elective admissions are planned by the consultant in charge taking into consideration the specific chemotherapeutic schedule and ward capacity.
- 4.2 All ill patients from the Emergency Department or other hospitals may be directly admitted to the ward and registration done later. In such cases the Emergency Department and referring hospital

must inform the ward consultants to discuss the case and the ward staff informed of the approximate time of arrival so that appropriate preparation to receive the patient could be arranged.

- 4.3 Arrival of patient in the ward. Patients shall be assessed by the staff nurse on arrival in the ward and reviewed by the doctor as soon as possible. Ill cases must be attended to immediately on arrival and placed in the acute bay. Stable patients and their accompanying parents should be seated while a bed is being identified for them. Patient particulars are entered into the admission book by the ward clerk/nurse and a file opened for clerking. All stable new patients shall be seen by a medical officer within one hour of admission and by the specialist within 24 hours of admission. Decision for discharge shall only be made by the specialist.
- 4.4 Assessment and Patient Care. On arrival, the staff nurse shall proceed with the initial assessment by taking the temperature, blood pressure, height and body weight. All of this information must be recorded in the temperature chart by the bedside. The medical officer shall then interview the patient accompanied by their parent before proceeding to perform the physical examination. Blood and other investigations are then ordered and samples dispatched as soon as possible. Drug prescriptions are entered into the inpatient prescription order sheet and STAT doses informed immediately to the staff nurse. The staff nurse will indent the required drugs from the pharmacy. The necessary health information at this point will be relayed to the patients and caregivers.
- 4.5 The patient and legal custodian shall be orientated on the facilities available in the ward e.g. toilet facilities, washing machine, drier etc. They shall be made aware of the rules and regulations of the hospital (e.g. no smoking within the hospital premise, prohibition of hand phone use, visiting hours, etc.)
- 4.6 *The Child Friendly Policy* shall be in practice. The guideline drawn up by the 'Persatuan Kesihatan Mesra Kanak-kanak Malaysia (PKMK)' shall be referred to whenever possible.

- 4.7 The "Tata Etika Pemasaran Makanan Bayi dan Produk Berkaitan 2008," shall be in practice. Formula Milk shall only be supplied upon request in writing and verified by the sister concerned.
- 4.8 All ill cases shall be placed in the isolation rooms nearest to the nurse's station.
- 4.9 Inter-ward transfer and discharges, including deaths of patients shall be updated in the computer under the SPPD.
- 4.10 All treatment ordered for the patient shall be recorded and signed legibly in the patient's case notes.
- 4.11 All procedures shall be carried out in the treatment room as far as possible. Procedures done elsewhere shall be arranged to minimize cross infection whilst maintaining privacy.
- 4.12 Drugs prescribed to hospital patients shall be in accordance to the approved list of drugs of Ministry of Health. Drugs outside the Ministry of Health 'Blue Book Formulary' shall be used on the discretion of the Consultant Paediatric Oncologist and approval sought from the Director General of Health in a timely manner.
- 4.13 All chemotherapy drugs shall only be prescribed by the specialist.
- 4.14 A master chemotherapy schedule record for every individual patient shall be drawn up in a special A3 yellow chemotherapy card. This card shall be made available for confirmation of the chemotherapy plan, dose of drugs to be given and brief summary of the patient's initial presentation and progress.
- 4.15 The legal custodian of dangerously ill patient shall be informed immediately of the patient's condition. If they are not around, they shall be informed by phone (if a telephone number is available) or via the hospital police counter to enlist the help of the police in locating them.
- 4.16 The police shall be informed, through the hospital police counter, of any patients found missing, after all efforts to trace the patient in the ward and the Institute grounds has failed.

- 4.17 The legal custodian wishing to take patients against medical advice may do so in writing.
- 4.18 The ward shall maintain an incident monitoring record and notify the Consultant and Head of Department of any untoward incidents occurring in the ward.
- 4.19 All notifiable diseases shall be notified to the Health Office through the Medical Records Department within 24 hours.
- 4.20 No leave of absence shall be granted to patients except in certain circumstances. AOR leave may be granted to the patient by the specialist.
- 4.21 The ward shall maintain a record of all inpatients.
- 4.22 A daily midnight census of patients shall be carried out.
- 4.23 The ward staff shall be responsible for moving patients within the department as well as to other departments.
- 4.24 Patients shall be transported on mobile beds (cots, bassinets, cribs), wheelchairs or trolleys. Ambulant patients may be escorted on foot.
- 4.25 Consent shall be obtained from the legal custodian prior to carrying out operative procedure. In case of an emergency and after all efforts to trace relatives and next of kin have failed, the Hospital Director and the Head of Department shall authorize for the procedure to be carried out.
- 4.26 An emergency trolley shall be made available at all times. The contents of the trolley shall be checked every shift and replenished accordingly.
- 4.27 Cases requiring surgery in the Operation Theatre shall abide by the policies of the Operation Theatre.

- 4.28 The ward staff shall be responsible for transferring the patient from the bed to the trolley and to the operation theatre (OT) and vice versa to ensure patient's safety.
- 4.29 Both patient and one guardian shall be supplied with four main meals. Dietary guidelines produced by the Ministry of Health shall be followed.
- 4.30 Patients' diet shall be indented "on-line" through the SPPD when this facility becomes available. Otherwise the staff nurse in-charge will indent the diet using 'Ward Diet Form (Med 33)'.
- 4.31 Patient's meals shall be brought to the wards in bulk trolleys and plated at the ward pantry by the nursing staff.
- 4.32 Discharges should be done on a planned basis as far as possible. The doctor shall notify the legal custodian of the patient's impending discharge a day in advance. Discharges should be done before noon to enable the patient to reach home as early as possible.
- 4.33 All patients shall be discharged to the legal custodian with written acknowledgement.
- 4.34 The legal custodian shall be informed of patient's death in the ward or via the hospital police counter if necessary. The deceased shall be sent to the mortuary at the end of an hour for release to the next of kin or for postmortem.
- 4.35 Mortuary attendants shall transport any patients who die in the hospital to the mortuary.
- 4.36 On discharge, a summary shall be done and patient's record returned to the Medical Records Department within 72 hours.
- 4.37 Patients shall be charged according to Fees (Medical) Order 1982.

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- 4.38 One parent or an adult guardian shall be allowed to accompany children in Paediatric Ward at night. Beds shall be provided for their night stay. Fathers shall be accommodated in the father's room whenever possible.
- 4.39 Security measures for patients shall be observed at all times by ward staff.
- 4.40 All the Quality Assurance Programmes of Ministry of Health shall be carried out accordingly.
- 4.41 Relevant aspects of the Whole Hospital Policies and Paediatric Department Policies shall be complied with.
- 4.42 The following guidelines and protocols shall be in practice:
 - a. *Manual Kualiti - Arahan Kerja untuk Pentadbiran Kejururawatan*
 - b. *General Policies and Guidelines of The Paediatric Department*
 - c. *'Garis panduan Prosedur Wad'*
 - d. *"Manual Prosedur Kerja" (MPK)*
 - e. *Paediatric Clinical Practice Guidelines*
 - f. *Nursing Guideline for Paediatric Oncology and BMT Ward*
 - g. *General Guidelines for the Paediatric Oncology Ward*

5. WHOLE HOSPITAL & DEPARTMENTAL POLICY

Relevant aspects of the Paediatric Department General Policies and Whole Hospital Policies shall be complied with.

PAEDIATRIC BONE MARROW TRANSPLANT UNIT POLICIES

1. OBJECTIVE

To perform pediatric haemopoietic stem cell transplantation and related procedures.

2. SCOPE OF SERVICE

- 2.1 Provision of facilities for the assessment, diagnosis, treatment, nursing and rehabilitation of children requiring bone marrow transplant.
- 2.3 Provision of counseling and health education to children, parents and guardians in an atmosphere which is child and family-friendly.
- 2.3 Provision of 24 hours service.

3. ORGANISATION

A Consultant Paediatric Haematologist-Oncologist trained in Paediatric Haemopoietic Cell Transplantation shall be in charge of the unit at any time and shall be assisted by the other Paediatric Haematologist-Oncologists, Specialists, Medical Officers, the ward Sister and staff nurses. The ward Sister in charge shall be responsible for the day-to-day management in the ward.

4. POLICY DESCRIPTION

- 4.1 Patients shall be admitted directly from home or transferred out from the Paediatric oncology ward. Elective admissions are planned by the consultant in charge and priority cases are discussed with the other Paediatric Haematologist-Oncologists.
- 4.2 Patients shall be assessed by the staff nurse on arrival in the ward and reviewed by the doctor as soon as possible. Pre-transplant assessment in the majority of cases would have been completed prior to admission to the BMT ward. All new patients shall be seen by a specialist within 24 hours of admission. Decision for discharge shall only be made by the specialist.

- 4.3 The patient and legal custodian shall be orientated on the facilities available in the ward e.g. toilet facilities, washing machine, drier etc. They shall be made aware of the rules and regulations of the hospital e.g. no smoking within the hospital premise, no hand phone, visiting hours etc.
- 4.4 The Child Friendly Policy shall be in practice. The guideline drawn up by the 'Persatuan Kesihatan Mesra Kanak-kanak Malaysia (PKMK)' shall be referred to whenever possible.
- 4.5 *Etika Produk Susu Formula Bayi KKM 1995* shall be in practice. Formula Milk shall only be supplied upon request in writing and verified by the sister concerned.
- 4.6 All ill cases shall be placed in the isolation rooms nearest to the nurse's station.
- 4.7 Inter-ward transfer and discharges, including deaths of patients shall be updated in the computer under the SPPD.
- 4.8 All treatment ordered for the patient shall be recorded and signed legibly in the patient's case notes.
- 4.9 All procedures shall be carried out in the isolation room itself as far as possible. Procedures requiring the patients to leave the rooms shall be arranged to minimize exposure to other patients and to minimize cross infection.
- 4.10 Drugs prescribed to hospital patients shall be in accordance to the approved list of drugs of Ministry of Health.
- 4.11 The legal custodian of dangerously ill patient shall be informed immediately of the patient's condition. If they are not around, they shall be informed by phone (if a telephone number is available) or via the hospital police counter to enlist the help of the police in locating them.
- 4.12 The police shall be informed, through the hospital police counter, of any patients found missing, after all efforts to trace the patient in the ward and the Institute grounds has failed.

- 4.13 The legal custodian wishing to take patients against medical advice may do so in writing.
- 4.14 The ward shall maintain an incident monitoring record and notify the Consultant and Head of Department of any untoward incidents occurring in the ward.
- 4.15 All notifiable diseases shall be notified to the Health Office through the Medical Records Department within 24 hours.
- 4.16 No leave of absence shall be granted to patients except in certain circumstances. AOR leave may be granted to the patient by the specialist.
- 4.17 The ward shall maintain a record of all inpatients.
- 4.18 A daily midnight census of patients shall be carried out.
- 4.19 The ward staff shall be responsible for moving patients within the department as well as to other departments.
- 4.20 Patients shall be transported on mobile beds. (cots, bassinets, cribs), wheelchairs or trolleys. Ambulant patients may be escorted on foot.
- 4.21 Consent shall be obtained from the legal custodian prior to carrying out operative procedure. In case of an emergency and after all efforts to trace relatives and next of kin have failed, the Hospital Director and the Head of Department shall authorize for the procedure to be carried out.
- 4.22 An emergency trolley shall be made available at all times. The contents of the trolley shall be checked every shift and replenished accordingly.
- 4.23 Cases requiring surgery in the Operation Theatre shall abide by the policies of the Operation Theatre.

Operational Policy, Paediatric Services

- 4.24 The ward staff shall be responsible for transferring the patient from the bed to the trolley and to the operation theatre (OT) and vice versa to ensure patient's safety.
- 4.25 Both patient and one guardian shall be supplied with four main meals. Dietary guidelines produced by the Ministry of Health shall be followed.
- 4.26 Patient's diet shall be indented "on-line" through the SPPD when this facility becomes available. Otherwise the Staff Nurse In-Charge will indent the diet using 'Ward Diet Form (Med 33)'.
- 4.27 Patient's meals shall be brought to the wards in bulk trolleys and plated at the ward pantry by the nursing staff.
- 4.28 Discharges should be done on a planned basis as far as possible. The doctor shall notify the legal custodian of the patient's impending discharge a day in advance. Discharges should be done before noon to enable the patient to reach home as early as possible.
- 4.29 All patients shall be discharged to the legal custodian with written acknowledgement.
- 4.30 The legal custodian shall be informed of patient's death in the ward or via the hospital police counter if necessary. The deceased shall be sent to the mortuary at the end of an hour for release to the next of kin or for postmortem.
- 4.31 Mortuary attendants shall transport any patients who die in the hospital to the mortuary.
- 4.32 On discharge, a summary shall be done and patient's record returned to the Medical Records Department within 72 hours.
- 4.33 Patients shall be charged according to Fees (Medical) Order 1982.

- 4.34 One parent or an adult guardian shall be allowed to accompany children in paediatric ward at night. Beds shall be provided for their night stay. Fathers shall be accommodated in the father's room whenever possible.
- 4.35 Security measures for patients shall be observed at all times by ward staff.
- 4.36 All the Quality Assurance Programmes of MOH shall be carried out accordingly.
- 4.37 Relevant aspects of the Whole Hospital Policies and Paediatric Department Policies shall be complied with.
- 4.38 The following guidelines and protocols shall be in practice :-
 - a. 'Panduan Tatacara Perawatan Pediatrik'
 - b. Manual Kualiti - Arahan Kerja untuk Pentadbiran Kejururawatan.
 - c. The Paediatric Department, General policies and guidelines.
 - d. Bone Marrow Transplant Protocol - Guidelines to Medical, Nursing and Laboratory Staff. 1st Edition July 1994 with addendums.
 - e. 'Garispanduan Prosedur Wad'
 - f. 'Manual Prosedur Kerja' (MPK)
 - g. Paediatric Clinical Practice Guidelines
 - h. Nursing Guideline for the Paediatric BMT ward
 - i. General Guidelines for the Paediatric Oncology Ward

5. WHOLE HOSPITAL & DEPARTMENTAL POLICY

Relevant aspects of the Paediatric Department General Policies and Whole Hospital Policies shall be complied with.

PAEDIATRIC RESPIRATORY UNIT POLICIES

1. OBJECTIVES

- 1.1 To provide a high standard and quality of clinical care based on evidence-based medicine in keeping with other centres worldwide.
- 1.2 To provide an individualised and comprehensive care for patient and his/her family.
- 1.3 To become the referral centre for paediatric respiratory cases requiring evaluation and assessment by key opinion leaders in paediatric respiratory for all sectors.
- 1.4 To conduct continuous medical education programmes and research for professional development in paediatric respiratory medicine.
- 1.5 To organise training in paediatric respiratory medicine for medical officers and paediatricians undergoing sub-specialization.
- 1.6 To create a conducive environment for children and families through Child-Friendly Hospital concept.

2. SCOPE OF SERVICES

The scope of services includes:

2.1 In-patient

- a. Assessment, diagnosis, treatment, nursing and rehabilitation of children with respiratory disorders
- b. Counseling and health education to children, parents and guardians in an atmosphere which is child and family-friendly.
- c. Provision of 24 hours service.

2.2 Out-patient

- a. Paediatric respiratory clinics
- b. Paediatric sleep clinic

2.3 Paediatric daycare services

2.4 Procedures

- a. Flexible Bronchoscopy
- b. Lung Function Testing
- c. Polysomnography
- d. 24 hours Esophageal pH monitoring
- e. 18 hours pulse oximeter monitoring
- f. Six minute walk test
- g. NIOX measurements

2.5 Community services

- a. Home Oxygen Therapy Programme
- b. Home ventilation programme
- c. Non-invasive ventilation programme for Obstructive sleep apnoea.

2.6 Training

- a. Provision of facilities for practical training of paramedics, medical students and post-graduates as well as in-service training for staff.
- b. To introduce new services while consolidating currently available services and to further expand and develop the specialty of paediatric respiratory medicine.
- c. To ensure the level of knowledge and skill of paediatric respiratory personnel continue to expand and improve by setting up the goal of training at unit level.
- d. Attendance of all doctors in all CME programs run by the unit should be more than 80%.
- e. Parents/Patients Education :-
 - Asthma education
 - Tracheostomy care
 - Ventilator, oxygen therapy, perfusor feeding
 - Basic life support

3. COMPONENTS OF UNIT

3.1 Ward for Respiratory patients

3.2 Specialist Clinics

- 3.3 Daycare for patients
- 3.4 OT for performing Bronchoscopy
- 3.5 Laboratory or room for performing complete Lung Function Test
- 3.6 Room or laboratory for performing polysomnography
- 3.7 Space to perform six-minute walk test

4. ORGANISATION

A Consultant Paediatric Respiratory Physician shall be in charge of the unit at any one time and shall be assisted by the other Paediatric Respiratory Physician, Clinical Specialists, Paediatrician undergoing clinical respiratory training, Medical Officers, the ward Sister and staff nurses. The ward Sister in charge shall be responsible for the day today management of the ward.

5. POLICY DESCRIPTION

5.1 Respiratory in-patients

Admission to paediatric respiratory unit can be :-

- a. Direct referrals from other hospitals after consultation with the Paediatric Respiratory Physician
- b. Transfer in from other wards
- c. Admission by Paediatric Respiratory staff from the Paediatric specialist clinic
- d. Accident and emergency department after consultation with Paediatric Respiratory Physician
- e. Walk in patients to respiratory ward for designated cases such as home oxygen therapy, home ventilation or high risk cases
- f. Old cases requiring acute treatment would be directly admitted to the ward during normal office hours or to the active ward after office hours or they may be admitted from the Accident and Emergency Department
- g. On admission all cases shall be seen by the medical officer on admission within an hour and by the specialist within 24 hours. However for ill cases shall be seen immediately

- h. Ill but stable patient will be placed in the acute cubicle for closed observations. However unstable patients will be managed in High Dependency Unit or to intensive care if they require ventilation. All treatment ordered for the patient shall be recorded and signed legibly in the patient's case notes
- i. All procedures shall be carried out in the treatment room as far as possible. Procedures done elsewhere shall be arranged to minimize cross infection whilst maintaining privacy. All treatment ordered for the patient shall be recorded and signed legibly in the patient's case notes
- j. Drugs prescribed to hospital patients shall be in accordance to the approved list of drugs of Ministry of Health. Drugs outside the Ministry of Health 'Blue Book' formulary shall be used on the discretion of the Consultant Paediatric Respiratory Physician and approval From the Director General of Health Malaysia
- k. Decision of discharge shall be made by the Paediatric Respiratory Physician or specialist after consultation with the Paediatric Respiratory Physician
- l. All cases for discharge will be given a small book specifying the diagnosis, treatment given and clinic appointment
- m. Parents or Caregivers will be informed of the diagnosis and plan of management. They would also be taught early symptoms and signs of the disease and the initial steps that must be undertaken before bringing them to the hospital
- n. Parents will be taught about care of the patients.

5.2. Respiratory out-patients

- a. All clinic cases shall be seen in the respiratory clinic at the Specialist Clinic according to the appointments given
- b. Patients requiring home oxygen therapy or serious cases or home ventilation requiring follow-up within 2 weeks of discharge shall be seen at the Day care facility or designated clinic
- c. Patients requiring Home Oxygen Therapy shall be prepared according to the 'Home Oxygen Protocol'

- d. Patients requiring home ventilation shall be prepared according to the Home Ventilation guidelines.

5.3 Paediatric Respiratory Daycare

- a. The paediatric respiratory day care services shall be provided for cases which do not require admission. These include cases with home oxygen and ventilation programme for review, continuous infusion, tracheostomy and other minor procedures.
- b. Appointments will be given in the Daycare appointment book.
- c. The management of the paediatric respiratory day care patients shall be by the Paediatric Respiratory Physician.
- d. The administration of the day care unit shall be under the responsibility of the sister in-charge supported by day care staffs.
- e. The receptionist in the Daycare shall be responsible to inform the paediatric respiratory doctor in-charge when the patient arrived.
- f. Paediatric respiratory specialist or trainee shall review and discharge patient after review. Discharge summary shall be done prior discharge from day care.
- g. If the case is not fit for discharge, the patient shall be admitted to the ward for further treatment.

5.4 Procedures

a. Bronchoscopy

- Elective cases for bronchoscopy shall be done in the Paediatric Operation Theatre or Paediatric/Neonatal Intensive Care Unit. Patients shall be admitted to the ward the day before. Appointments will be given through the appointment book on Friday of the second and fourth week. A list of cases shall be sent to the OT and the ET department one day prior to the bronchoscope day. The list shall be prepared and signed by the Paediatric Respiratory Physician in charge.
- Consent for bronchoscopy shall be obtained from the parents by the Specialist and adequate information regarding the procedure explained.

- Emergency bronchoscopy shall be done at any time necessary when the OT is available. The scope will be performed by the Paediatric Respiratory Physician. For care of the upper airway, an ENT surgeon will be present if a rigid scope is required.

b. Polysomnography

- Sleep study appointment shall be done through the Paediatric Respiratory Physician in the sleep appointment book. Patient must be admitted during office hours and the study done overnight. The patient may be discharged the next day.
- The sleep study will be reported within three days for urgent cases and within two weeks for non-urgent cases after the sleep study.
- A clinic appointment shall be given 4 weeks after the sleep study. The cases must be discussed with the Paediatric Respiratory Physician.

c. 18 hours pulse oximeter monitoring

- All appointments are made after discussion with the Paediatric Respiratory Physician.
- Patients will be admitted during office hour and will spend a night in the ward.
- The technician/nurse will connect the probe to the patient and will be monitored till the next morning. The data will be unloading and printed. It will be reported by the Paediatric Respiratory Physician.
- Patient will be discharged after review by the specialist.

d. Lung function test

- Lung function test is needed for all patients with chronic lung disease who can perform the test.
- Lung function test can be done by adhoc basis or by appointment after discussion with the Paediatric Respiratory Physician during office hour and clinic day.
- The lung function test will be performed by the technician/medical assistant.

- The result will be reported by the Paediatric Respiratory Physician within 24 hours.

e. 24 hour pH monitoring

- All patients need to make appointment for the study with the technician/medical assistant in charge through the Paediatric Respiratory Physician or Paediatric Gastroenterologist.
- The patient needs to be admitted in the morning for the procedure if they are outpatients for 24 hours.
- They may be discharged the next day.
- The monitoring will be uploaded to the computer after the completion of the study.
- Report will be made available within 24 hours. It will be reported by a Paediatric Respiratory Physician or Paediatric Gastroenterologist.

5.5 Community services

- a. Home visit will be done by trained personnel to review and evaluate home suitability prior to starting home oxygen programme.

PAEDIATRIC DERMATOLOGY UNIT POLICIES

1. OBJECTIVES

To provide a holistic and optimum care for children and adolescent with skin diseases that are appropriate, effective and efficient.

2. SCOPE OF SERVICES

The Paediatric Dermatology Unit shall provide the following :-

- 1.1 To provide diagnostic, curative and rehabilitative services that are appropriate, effective, efficient and in a timely manner to children with neurological disorders.
- 2.2 To provide adequate and continuous training, and continuous motivation for its personnel.
- 2.3 To promote good rapport among personnel, patients, family and the community.
- 2.4 To cultivate and strengthen the positive attitudes towards learning and knowledge, quality assurance and community participation.
- 2.5 To conduct good quality research in paediatric neurology.

3. COMPONENTS OF THE UNIT

The service components in pediatric dermatology compromise the following:

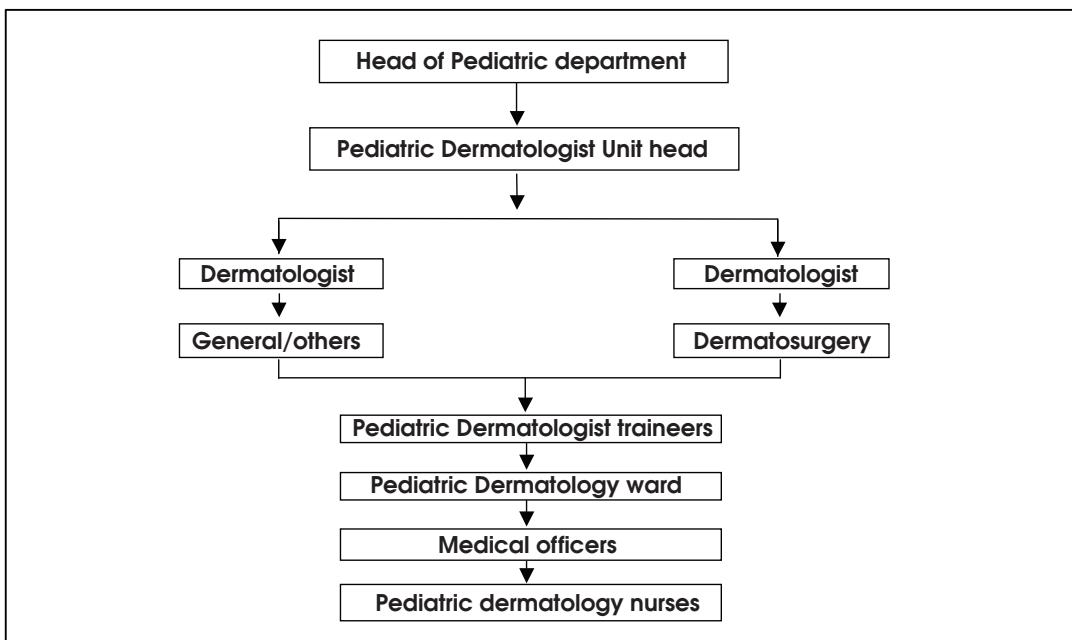
- 3.1 Out-patients / Clinics
- 3.2 In-patients / wards
- 3.3 Day care for skin patients

4. ORGANIZATION

- 4.1 The unit shall be headed by a senior consultant pediatric dermatologist
- 4.2 The number of consultant pediatric dermatologist will depend on the need and availability of personnel with minimum of 2 consultants.

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- 4.3 The medical officers in the unit will be from the general pediatric department who comes on scheduled rotation. The number of medical officers depend on the availability of medical officer with minimum of one at any one time.
- 4.4 The unit will be organized into various subspeciality subunit: general dermatology, genodermatoses, allergy, laser therapy and each unit headed by own pediatric dermatology in the unit.
- 4.5 The organizational chart is as follow:



5. OPERATIONAL POLICIES

5.1 Admission and discharge policies

- a. Admission to the pediatric dermatology unit can be from:-
 - the paediatric dermatology clinic
 - direct referrals from other hospitals or wards
 - General Pediatric Clinics
 - The Accident and Emergency department
- b. For policies on admissions and discharge - refer to departmental operational policies.

5.2 Outpatients

- a. All pediatric dermatology patients shall be seen by the specialist with an assisting medical officer.
- b. All patients with atopic dermatitis shall have a skin care plan written clearly before leaving the clinic.
- c. All patients with atopic dermatitis should have an appointment for counseling clinic within minimum 2-4 weeks of first consultation.
- d. The specialist and a pediatric dermatology nurse shall see patients at counseling clinic.
- e. Pediatric dermatology patients on immunosuppressive agents should have blood investigations as ordered by specialist before appointment.
- f. All investigations results should be reviewed before the clinic appointment and any abnormalities should be addressed. This may include recalling the patients earlier for review or for repeat blood tests.

5.3 Referrals

- a. Referrals to the Paediatric Dermatology Unit, The specialist or one of the medical officers will arrange to see the patient in the dermatology clinic on a scheduled appointment only with referral letters.
- b. All new case shall been seen within 6 weeks of refferrals
- c. In- patients referrals to be seen within 24 hours of referrals
- d. Emergency cases shall be seen by the Emergency Department and admitted to the Paediatric Ward if necessary
- e. Direct admission shall be arranged directly with the specialist
- f. The patient, after treatment either as an outpatient or in-patient, may be referred back to the referring doctor for follow-up. A reply to the referring doctor should be provided, with the necessary information and management plan to enable the referring doctors to continue subsequent management of the patient

5.4 Outpatient care policies

Upon receiving referrals from private clinics, health care centers, or other hospitals, the patient should register themselves at the Registration counter (Klinik Pakar Pediatrik) and will be given a call number and informed of the room number to wait.

5.5 Documentation of clinical notes

- a. The specialist should ensure that all doctors in the unit make accurate, comprehensive and legible documentation of clinical notes.
- b. Documentation shall include:
 - Patient identification data
 - Clinical history and examination
 - Investigations and results
 - Treatment given
 - Procedures undertaken and reasons
 - Follow-up notes and consultation
 - Communication with the patient, his relatives, other doctors, other authorities, etc.
- c. Case summaries shall be completed and case notes dispatched to the Medical Records Department within 3 working days from the day of discharge.
- d. Medical reports shall be prepared and dispatched to the Medical Records Department within 30 days from the date of request. For cases where the medical officer treating the patient is not available, another medical officer in the department shall be assigned to prepare the report.

6. TRAINING

- 6.1 The unit shall conduct regular CME activities for all medical personnel to continually improve clinical skills and knowledge.
- 6.2 Department CME activities which includes journal read, topic discussion, and dermatology-histopathological conference.

- 6.3 Training for pediatric dermatologist for duration of 3 years in accordance with the guidelines adopted by the Bahagian Perkembangan Perubatan KKM.
- 6.4 Training for the medical officers on a 3 monthly rotation basis and by attending conferences and courses.
- 6.5 Training for the nurses by sending them for courses, conferences, and also through clinical supervision at work.

7. UNIT MEETING

- 7.1 Unit meeting shall be held regularly, once a week to discuss problems and ways to overcome the problems.
- 7.2 Problems that cannot be solved at the unit level, shall be brought up to the department level.

8. WHOLE HOSPITAL & DEPARTMENTAL POLICY

Relevant aspects of the Paediatric Department General Policies and Whole Hospital Policies shall be complied with.

PAEDIATRIC INFECTIOUS DISEASE UNIT POLICIES

1. OBJECTIVE

- 1.1 To provide diagnostic, curative and preventive services that are appropriate, effective, adequate and comfortable to children requiring hospital care so as to ensure proper development and general well being of the patient.
- 1.2 To provide continuous medical education (CME) activities at all levels of medical care (allied health or postgraduate) to ensure adequate professional attainment at preventive, curative and research aspects or purposes

2. SCOPE OF SERVICE

- 2.1 Provision of facilities for the assessment, diagnosis, treatment, nursing and rehabilitation of children requiring inpatient medical care as well as outpatient
- 2.2 Provision of counseling (including HIV/AIDS, ID and travel medicine) and health education to children, parents and guardians.
- 2.3 Provision of immunization services for patients with incomplete immunization (missed opportunities).
- 2.4 Provision of facilities for practical training of paramedics, medical students, and post graduates as well as in-service training for staff.
- 2.5 Provision of 24 hours service.

3. ORGANISATION

A Consultant Paediatrician shall be in charge of the ward and shall be assisted by the other Consultants, Clinical Specialists, Medical Officers, Ward Sister and nursing personnel. The ward Sister in charge shall be responsible for the day to day management of the ward.

4. POLICY DESCRIPTION

- 4.1 Patients shall be admitted through the admission registration counter whenever possible.
- 4.2 All newborns of HIV positive or 'high risk' mothers will be admitted

to Special Care Nursery (SCN) for initiation of prophylaxis antiretroviral therapy for a total of six weeks. They will not be breast-fed (substituted with bottle feeding). After discharge they will be followed up in the HIV clinic for a review of their well-being and their bloods taken for HIV testing (HIV antibody and PCR)

- 4.3 Critically ill patients from the Emergency Department or other hospitals may be transferred directly to the ward, and the admission formalities attended to subsequently. In such circumstances, the Emergency Department and the other hospitals shall inform the ward staff and the Medical Officer/Specialist respectively, prior to sending the case.
- 4.4 Patients requiring isolation, shall be nursed in single rooms wherever possible. HIV patients with desirable CD4 counts will be placed in general ward pool.
- 4.5 Advanced HIV/AIDS patients will be nursed in isolation rooms for reverse barrier nursing procedures
- 4.6 All ill cases shall be placed near the nurse station.
- 4.7 Inter-ward transfers and discharges including deaths of patients shall be updated in the computer under the SPPD.
- 4.8 Security measures for babies shall be observed at all times by ward staff.
- 4.9 All the Quality Assurance Programmes of MOH shall be carried out accordingly.
- 4.10 Relevant aspects of the Paediatric Department Policy and Whole Hospital Policies shall be complied with.
- 4.11 The following guidelines, consensus and protocols shall be put in practice :-
 - a. Garispanduan Prosedur Wad
 - b. The "Manual Prosedur Kerja" (MPK)
 - c. Paediatric Clinical Practice Guidelines

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- d. Paediatric HIV/AIDS Antiretroviral Therapy Consensus 2nd Edition (2001)
- e. Infection Control Manual by MOH

5. WHOLE HOSPITAL & DEPARTMENTAL POLICY.

Relevant aspects of the Paediatric Department General Policies and Whole Hospital Policies shall be complied with.

ADOLESCENT MEDICINE UNIT POLICIES

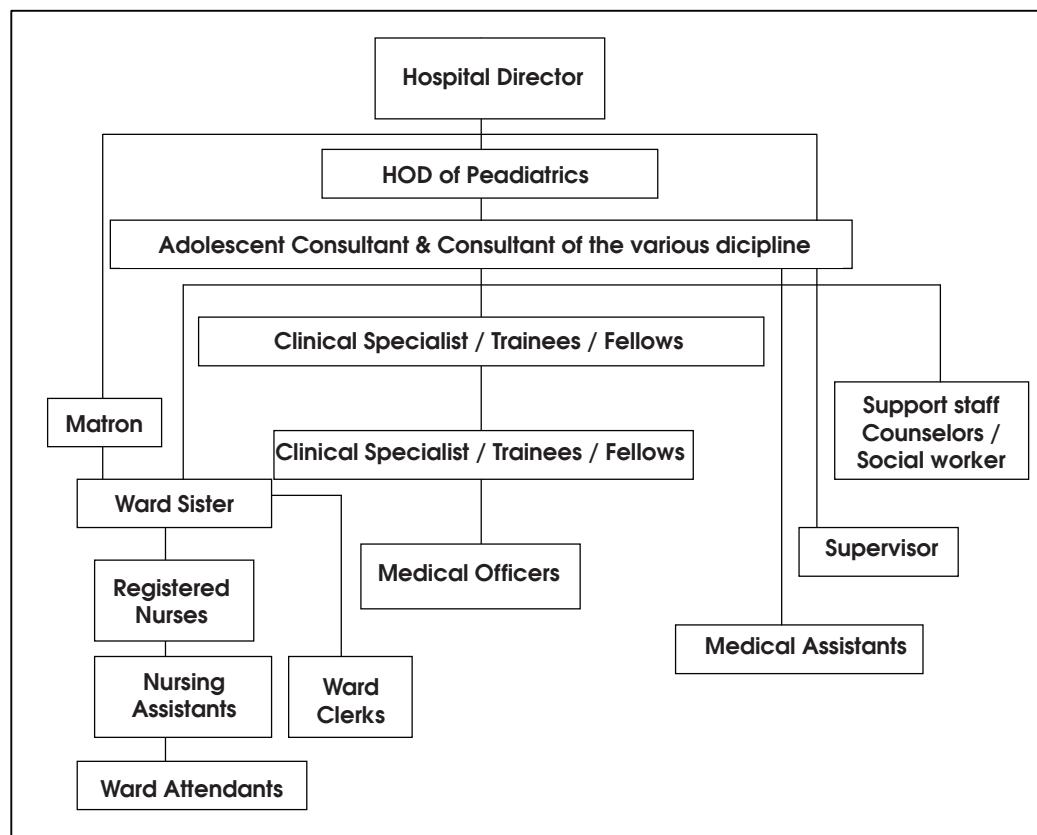
1. OBJECTIVES

- 1.1 To provide diagnostic, curative and rehabilitative services that are appropriate, effective, adequate and comfortable to adolescents requiring care so as to ensure proper development and general well being of the patients.
- 1.2 To provide Continuous Medical Education (CME) at all levels of medical care, to ensure adequate professional attainment at preventive, curative and research aspects or purposes.
- 1.3 Provision of facilities for the assessment, diagnosis, treatment, nursing and rehabilitation of adolescents requiring medical care.
- 1.4 Provision of counselling and health education to adolescents, parents and guardians.
- 1.5 Provision of facilities for practical training of paramedics, medical students and post graduates as well as in service training for staff.
- 1.6 Provision of 24 hours service.

2. ORGANIZATION

A consultant Paediatrician trained in Adolescent Medicine shall be in charge of the ward and shall be assisted by other consultants from the various disciplines, Clinical Specialists, Medical Officers, ward sister and nursing staff. The ward sister shall be in charge for the day to day management of the ward.

ORGANIZATIONAL CHART



3. POLICY DESCRIPTION

- 3.1 Patients shall be admitted through the admission registration counter from the A&E Department, OSCC or the Adolescent Clinic.
- 3.2 The general age for admission ranges from 12 yrs to 18 yrs.
- 3.3 The patient has to have adequate mental, physical and emotional capacity to communicate effectively with other adolescents in the ward.
- 3.4 All the various disciplines in the Hospital may admit their adolescent patients in the adolescent Wards. The consultants of the various disciplines are the primary consultants of their patients and the Adolescent Specialist will be in charge of the management of the other psychosocial aspects of the patients.

- 3.5 Male and female patients will be segregated by common recreation and dining areas and all patient interactions will be supervised by trained staff.
- 3.6 Staff members of adolescent wards need to be sensitive and non judgemental.
- 3.7 Critically ill patients from the Emergency Department or other hospitals may be transferred directly to the ward, and the admission formalities attended to subsequently. In such circumstances, the Emergency Department and the other hospitals shall inform the ward staff and the medical officer/specialist of the admitting ward, prior to sending the case.
- 3.8 Patients shall be seen by the house officer or Medical officer as soon as possible. All patients shall be seen by the attending Specialist and Adolescent specialist at least once daily during their hospitalisation.
- 3.9 The legal custodian of the patient shall be orientated on the facilities available in the ward eg toilet facilities etc. They shall be made aware of the rules and regulations of the hospital eg no smoking within the hospital premise, no hand phone, visiting hours etc.
- 3.10 Patients requiring isolation shall be nursed in single rooms whenever possible.
- 3.11 All ill cases shall be placed near the nurses station.
- 3.12 Interward transfer and discharges including deaths of patients shall be updated in the computer under the SPPD.
- 3.13 All treatment ordered for the patient shall be recorded and signed legibly in the patient's case notes.
- 3.14 All procedures shall be carried out in the ward as far as possible. Adequate privacy shall be ensured.

- 3.15 The police shall be informed through the hospital police counter of any patient found missing after all efforts to trace the patient have failed.
- 3.16 The legal custodian wishing to take patients against medical advice may do so writing using the appropriate form.
- 3.17 The ward shall maintain an incident monitoring record and notify the Hospital Director and consultant of any untoward incidence occurring in the ward.
- 3.18 All notifiable diseases shall be notified to the Health Office through the medical records department within 24 hours. Cases eg dengue, food poisoning etc shall be notified immediately via phone.
- 3.19 The ward shall maintain a record of all inpatients.
- 3.20 A daily midnight census of patients shall be carried out.
- 3.21 All referral shall be in accordance with existing guideline.
- 3.22 The ward staff shall be responsible for moving patients into the Paediatric ICU or anywhere within the hospital.
- 3.23 Consent shall be obtained from the legal custodian prior to carrying out operative procedure. In case of an emergency and after all efforts to trace relatives and next of kin have failed, the Hospital Director and the Head of Department shall authorize for the procedure to be carried out.
- 3.24 An emergency trolley shall be made available at all times. The contents of the trolley shall be checked every shift and replenished accordingly.
- 3.25 Cases requiring surgery in the Operation Theatre shall abide by the policies of the Operation Theatre. The ward staff shall be responsible for transferring the patient from the bed to the trolley (OT) and vice versa to ensure patient's safety.

- 3.26 All patients shall be supplied with four main meals if not fasting. Dietary guidelines produced by the Ministry of Health shall be followed.
- 3.27 The legal custodian shall be informed of patient's death in the ward or via the hospital police counter if necessary. The deceased shall be sent to the mortuary at the end of an hour for release to the next of kin or for postmortem.
- 3.28 Mortuary attendants shall transport any patients who die in the hospital to the mortuary.
- 3.29 Patients shall be charged according to Fees (medical) Order 1982.
- 3.30 The following guidelines and protocols shall be in practice:
 - a. Garis panduan Ward Prosedur
 - b. The 'Manual Prosedur Kerja' (MPK)
 - c. Paediatric Clinical Practice Guidelines
 - d. The duties of medical officers
 - e. Discharge policies
- 3.31 Patients will be evaluated before discharge and follow up to the Adolescent Clinic given.

NEONATOLOGY UNIT POLICIES

1. OBJECTIVES

- 1.1 To provide diagnostic, curative and rehabilitative services for newborn infants.
- 1.2 To optimize outcome of the newborns of high risk pregnancies.
- 1.3 To work with parents as partners in the health care of their infants.
- 1.4 Promote audit, research in neonatal care and continuous professional development of staff members.

2. SCOPE OF SERVICES

- 2.1 Combined antenatal management of high risk pregnancies with obstetric team in the management of antenatal mothers with at-risk pregnancies.
- 2.2 Provision of care for babies up to 44 weeks post-conceptional age.
- 2.3 Combined management of neonatal patients requiring surgical intervention or other subspecialty care.
- 2.4 Screening and review of referred newborn infants from postnatal wards for common neonatal conditions.
- 2.5 Outpatient follow-up of neonatal unit 'graduates' and referral cases.
- 2.6 Promotion of breast feeding for inpatients in keeping with baby-friendly hospital status.
- 2.7 Training of medical and nursing personnel in neonatal resuscitation and neonatal care.

3. ORGANISATION

- 3.1 The neonatal unit is headed by a neonatologist working together with other neonatology consultants, clinical specialists and the ward sisters. Units without neonatologists will be headed by a paediatrician.
- 3.2 The consultants and clinical specialists are responsible for the medical management of patients and all education, training and continuous professional development activities within the neonatal unit.
- 3.3 The ward sisters are responsible for the day-to-day management of the ward such as nursing care, census, purchase of consumable items, adherence to protocols, and infection control.
- 3.4 Specific nurses responsible for in-house neonatal nursing training, lactation and infection control policies would be assigned.
- 3.5 Medical assistants are responsible for the maintenance and assistance in the setting up equipment to the patient

4. OPERATIONAL POLICIES

4.1 Admissions

Admission to NICU or special care nursery (SCN) can be from:

- a. labour room, maternity operation theatres or postnatal wards
- b. the Accident and Emergency Department
- c. the paediatric clinic
- d. other hospitals directly

Some beds will cater for rooming in with mothers or for isolation.

a. Direct admission of newborns from LR/OT to neonatal wards

- Birth weight <1.8kg or < 35 weeks gestational age*
Infants of gestation above 35 weeks and >1.8kg need monitoring in postnatal wards, to establish feeding and temperature control
- Birth weight >4.5kg

- Infant of diabetic mother on insulin (Other infants of diabetic mothers can be monitored in the postnatal wards or in special care nursery)
- Infant of drug dependent/ other substance abuse mother
- Risk of sepsis
- Low Apgar scores < 6 at 5 minutes
- Respiratory distress*
- Major congenital anomalies*
- Jaundice noted at birth*
- All babies of mothers with significant medical illness (if in doubt consult neonatologist/ paediatrician).
- Babies with known metabolic disease in their sibling
- Birth trauma
- Meconium aspiration*

* All such deliveries must be attended to by a **doctor trained in neonatal resuscitation**

b. Guidelines For Direct Neonatal Admission From Other HealthCare Facilities

- Booked admissions should be directly admitted to the ward (rather than admission through A&E).
- Babies requiring ventilation beds or potentially requiring ventilation will only be accepted if ventilator beds are available. District hospitals can arrange transfer to its regional hospital for stabilization and subsequent transfer to another hospital with available ventilator bed
- Babies already receiving ventilatory support in other hospitals should be transferred over to NICUs electively pending bed availability.
- Booking of ventilation beds, including those for elective neonatal operations, should be done through the medical officer. The ward should also be informed of transfer of ill patients from other wards/departments in the hospital.
- Neonates referred for subspecialty care should be made known to the neonatal medical officer in addition to the surgeon or subspecialist.

- Patients should be adequately stabilized prior to transfer to NICU and to consult the neonatologist/ paediatrician in-charge should the stabilization be difficult.
- Referring hospital staff will accompany the parent to register the patient at the hospital admission areas.
- Babies that are brought in dead will be brought back to the referring clinic/ hospital by their own staff.

4.2 Referrals

- a. Referrals from obstetric or postnatal wards
 - G6PD deficiency/ Rh negative mother (with Rh positive partner)
 - Infant of diabetic mother -not initially admitted to SCN at birth.
 - Minor congenital anomalies.
 - Neonatal jaundice.
 - Problems with feeding or respiratory difficulties, passage of urine/ stool.
 - Mothers with potential vertically transmitted diseases eg. those who are VDRL/TPHA +ve, Hbs Ag +ve, HIV +ve.
- b. Standby for Neonatal Resuscitation
A doctor trained in neonatal resuscitation should be present at all high risk deliveries. It is recommended that the following situations warrant a paediatric doctor standby for resuscitation :-
 - Preterm infants < 35 weeks
 - Moderate or thick meconium stained liquor
 - Abnormal CTG or scalp pH < 7.20 or other indications of foetal distress
 - Cord prolapse
 - Antepartum haemorrhage
 - Multiple births
 - Instrumental delivery (not for uncomplicated low forceps or vacuum lift-out)
 - Emergency caesarian section
 - Infants with significant congenital malformations diagnosed antenatally

- Bad obstetric history

The O&G registrar/medical officer must inform his paediatric counterpart when standby is required and give an appropriate time for the paediatric doctor to arrive for standby before delivery.

4.3 Infant feeding

- a. Breastfeeding and breastmilk is encouraged for all infants in the ward
- b. Under special circumstances, supplementation with infant formula milk products shall be allowed in the ward for preterm infants where mother's expressed breast milk is insufficient and for infants at risk of hypoglycaemia or in circumstances where breastmilk is contraindicated.
- c. Special infant formula will be given for babies of inborn errors of metabolism
- d. Ready-to-feed formula shall be provided if there is no milk kitchen

4.4 Neonatal screening

- a. All newborn in MOH hospitals are screened for congenital hypothyroidism, G6PD deficiency. Physical examination check for common congenital abnormalities is also done for all newborn infants within the first 24 hours of life.
- b. Screening for retinopathy of prematurity is done for all preterm infants < 32 weeks or birth weight < 1500 grams
- c. Hearing screening is done for all NICU graduates and newborn with known risk factors for hearing loss

4.5 Data and audit

The Neonatal registry form (NNR) will be completed and submitted for babies who fit the selected inclusion criteria. Discussions on antenatal counseling, management of high risk pregnancies and perinatal mortality and morbidity will be held with the obstetric colleagues.

4.6 Discharge policy

- a. Preterm infants can be discharged after showing weight gain to 1.8 kg and a corrected gestational age of at least 35 weeks.

- b. Discharges at lower weight is at the specialist's discretion.
- c. In general, infants are discharged upon establishing adequate feeding pattern, temperature control and not in respiratory distress. Exceptions to this would be dependent on the neonatologist in-charge (ie severe HIE, infants on home oxygen therapy or an infant with special needs).
- d. Infants at risk of long term neurodevelopmental and other problems will be followed up in the paediatric clinic.
- e. Appropriate immunization to be given before discharge.

4.7 Other related operational policies

- a. MOH Breast feeding policy (Tata Etika Pemasaran Makanan Bayi dan Produk Berkaitan 2008)
- b. Hospital ICU infection control policy
- c. Babies born to HIV positive mothers
- d. Immunization policy
- e. Security policy for neonatal wards

PAEDIATRIC SPECIALIST CLINIC POLICIES

1. VISION

Same as the Paediatric Department.

2. MISSION

To provide an excellent and high quality out-patient paediatric clinic services by a team of dedicated and professionally trained personnel who are committed, compassionate and disciplined.

3. OBJECTIVES

- 3.1 To provide an effective Paediatric Out-patient Sub-Specialty Clinic and General Paediatric Clinic for childhood and adolescent problems.
- 3.2 To provide basic emergency facility to cater for ambulatory out-patient attendances.
- 3.3 To provide relevant health education to parents and care givers on issues of child health.
- 3.4 To provide basic childhood immunisation services.
- 3.5 Quality objective in which 90% of patients are to be served by the clinic personnel within half an hour after registration.
- 3.6 Quality objective in which 90% of the patient's medical records to be traced before the appointment date.
- 3.7 The Paediatrics Specialist Clinic would operate daily in a punctual manner.

4. SCOPE OF SERVICES

- 4.1 The Paediatric Outpatient Clinic operates during office hours according to the clinic schedule.
- 4.2 Referral and follow-up Paediatric cases are to be seen on an appointment basis.
- 4.3 To provide immunisation services to children according to the standard immunisation schedule.

4.4 To provide 'blood-taking' facilities for investigation and also minor procedures (wound dressing, toilet & suture, etc.)

5. ORGANISATION

5.1 The Paediatrics Specialist Clinic is headed by a Consultant Paediatrician from the Paediatrics Department.

5.2 The day-to-day management of the Paediatric Specialist Clinic shall be the responsibility of the nursing sister assisted by staff nurses, assistant nurses and 'Atenden Kesihatan'.

5.3 The clinic is made up of the various paediatric sub- specialties and each team is headed by the unit head.

6. OPERATIONAL POLICIES

6.1 Patient shall be seen at Paediatrics Specialist Clinic only on an appointment basis and patients without an appointment shall be seen only if necessary according to the discretion of the specialist or individual sub-specialty.

6.2 Patients medical records are to be traced a week before the appointment date and are kept confidential.

6.3 Patients for admission to the wards are accompanied by a nurse or attendant.

6.4 Patients' weight and height are taken before consultation. Blood pressure is taken for all nephrology patients and other relevant groups of patients.

6.5 Examination of female patients by male doctors shall be chaperoned by female staff.

6.6 Injections, dressing and ECG are carried out in the procedure rooms.

6.7 Immunizations are given in the treatment room by the staff nurse.

6.8 Blood specimens are taken in the treatment room by staff nurse.

6.9 *The Baby Friendly Policy* shall be in practice. Breast feeding facilities shall be made available for mothers.

- 6.10 The staff nurse or sister shall keep an updated inventory of all equipment and ensure that they are maintained regularly and kept in good functional condition.
- 6.11 An emergency trolley shall be made available at all times. The contents are checked daily and replenished accordingly.
- 6.12 CSSD sets and Dangerous Drugs are daily checked and recorded.
- 6.13 Clinic census or statistics are maintained and submitted to medical records monthly.
- 6.14 Any untoward incident in the clinic is recorded and notified to the Consultant, Head Of Department and Hospital Director.
- 6.15 Cleaning and housekeeping of premises including supply of clean linen shall be done by the concession holders which are appointed by Ministry Of Health Malaysia according to schedule drawn up and agreed upon by Hospital and concession holders

7. TRAINING

- 7.1 Regular teaching activities will be carried out for staff to improve knowledge and skill.
- 7.2 Nurses are sent regularly for courses, conferences and in-house training is done through clinic supervision during working hours.
- 7.3 Health education is given to patients by nurses and doctors as and when the need arises

8. UNIT MEETINGS

- 8.1 Staff meeting shall be held once a month to discuss problems and its solution.
- 8.2 Problems that cannot be solved during the meetings will be brought up to the matron or to the department meeting.

9. WHOLE HOSPITAL & DEPARTMENTAL POLICY

Relevant aspects of the Paediatric Department General Policies and Whole Hospital Policies shall be complied with.

PAEDIATRIC DAY CARE UNIT POLICIES

INTRODUCTION

Paediatric day care centers shall be appropriately designed, staffed and equipped for the treatment of children. If there is no paediatric surgical daycare services, the daycare will be used mainly for the medical daycare.

1. VISION

Same as the Paediatric Department's vision.

2. MISSION

- 2.1 To reduce the number of ward admission for patients who require simple procedures, investigations or treatment that can be done within the day, thus reducing the cost of medical treatment, nosocomial infection as well as being more friendly to the patient and family.
- 2.2 To provide diagnostic, curative and rehabilitative services that is appropriate, effective, adequate and comfortable to children as an outpatient on a day to day basis.

3. SCOPE OF SERVICE

- 3.1 The Day Care Unit (DCU) receives patients who are referred from the wards or the Paediatric Outpatient Clinics.
- 3.2 The DCU provides services on working days and is closed on Public Holidays.
- 3.3 Official working hours are: 7.00 a.m. till 9.00 p.m. on Mondays till Fridays
- 3.4 The DCU caters for a wide variety of patients from multiple disciplines:-
 - a. Haematology
 - Blood and blood product transfusions for thalassaemia and aplastic anaemia patients scheduled from the clinics/wards.
 - b. Oncology
 - Blood taking and review
 - Central venous line flushing
 - Bone marrow aspiration & trephine biopsy

- Diagnostic lumbar puncture and intrathecal chemotherapy administration
- Intravenous, intramuscular and subcutaneous chemotherapy administration
- Transfusion of blood and blood products
- c. Gastroenterology
 - Patients for Oesophagogastroduodenoscopy under GA
 - Patients for pH study
 - Changing of nasogastric tubes
- d. Dermatology
 - Patients for skin biopsy, local treatments and review
- e. Cardiology
 - Patients for echocardiogram
- f. Respiratory
 - Administration of nebulisers for patients from the outpatient clinic
 - Review of patients with chronic lung problems
- g. Genetic and Metabolic
 - Blood taking and review of new & follow-up cases whenever necessary
 - Skin biopsies
- h. Surgery
 - Minor surgical procedure under GA e.g. herniotomy, circumcision, and orchidopexy
 - Minor procedure under sedation e.g. desloughing and dressings
- i. Diagnostic Imaging
 - Patients coming in for diagnostic imaging procedures either with or without sedation e.g. CT scan, IVU, MRI, MCU, ultrasound, barium meal / swallow, genitogram / loopogram
- j. Nuclear Imaging
 - Patients requiring nuclear imaging studies with or without sedation e.g. DMSA, DTPA, Bone scan and HIDA scan
- k. Endocrine
 - Various laboratory diagnostic lab procedures/test for endocrine disorder e.g. Insulin tolerance test etc
- l. Dental
 - Minor dental surgery
 - Dental clearance

- m. ENT /audiology
 - ABR (audiology brain response) under sedation
- n. Others
 - Suprapubic aspiration of urine, Ryle's tube change, catheterization, intravenous immunoglobulin

4. DESIGN AND ENVIRONMENT

4.1

Design Characteristic

- a. A well-defined dedicated facility should be provided for the children, separate from the adults and from the inpatients.
- b. The center should be multidisciplinary but dedicated to children only. The physical environment should provide for the various and special needs of children and adolescents and in particular the special emotional needs of children must be recognized.
- c. This area should be furnished and decorated in a manner that is comfortable and reassuring for both patients and their parents.
- d. The children's area must be easily observed at all times by trained and registered nursing staff familiar with the care of children.
- e. Suitable play areas and play facilities should be provided in the waiting area.
- f. The design of consulting and treatment areas must permit parents to remain with their child.
- g. The treatment and procedure rooms must be fully equipped to manage paediatric emergencies if required.
- h. All the daycare centers should have a nappy change room and a separate breastfeeding room
- i. A dedicated direct telephone line in and out of the center is essential.
- j. There should be internet access available.

4.2

Special areas

- a. Common areas
- b. Lounge/TV area
- c. Play area for the younger children
- d. Reading/ quiet area for the older children/ adolescents

- e. Kitchenette/Pantry with controlled access to parents
- f. Toilets with showers for the patients, attached to the cubicles
- g. Public toilets in the common area

5. ORGANISATION

The daily functioning of the unit is under the care of a nursing sister and her team of nursing staff and health attendants. As patients are from various units and disciplines, each patient will also be under a joint management of doctors from the various units and disciplines. At least one medical officer is appointed on a rotational basis to carry out the procedures and administer the sedations. He/she is also required to run the thalassaemia clinic with the specialist whenever possible.

6. OPERATIONAL POLICIES

6.1 Admission and Discharge

- a. Patients referred for investigations, treatment or a procedure referred from the various wards and outpatient clinic must be given an appointment and the appointment book is kept at the nursing counter. Patients have to be admitted to the unit on the appointment date given.
- b. On the appointment day patients are registered at the registration counter before being admitted to the DCU. Children have to be accompanied by at least one parent or guardian.
- c. Patient's particulars will be recorded in the admission book.
- d. The nurse on duty will record the vital signs taken on admission. The weight and height of the patient will be charted on the monitoring chart.
- e. The doctor in charge will discharge the patient after review.
- f. Patients will be given an appointment back to the Day Care Unit, the Clinic or admission appointment to the ward depending on the plans decided by the team looking after the child.
- g. Patients who cannot be discharged by the time the DCU close who requires further monitoring will be transferred to the ward.
- h. Exclusion criteria for day surgery/procedure should be strictly adhered to

Medical Exclusions	ASA Class 3, 4 or 5 Diabetes mellitus IEM Untreated or complex congenital disease Active viral or bacterial infection esp. URTI
Age exclusions	Ex-premature baby up to 60 weeks post conceptual age
Anaesthetic exclusions	Inexperienced anaesthetist Operations of more than 1 hour Difficult airway Family history of malignant pyrexia Siblings of child with SIDS Haemoglobinopathies
Surgical Exclusions	Inexperienced surgeons Prolonged painful procedures Opening of body cavity High risk of post-op haemorrhage Adenotonsillectomy
Social exclusions	Single parent with several children Poor home circumstances No transport Long distance from home (more than 1 hour)

Working hours will depend on workload, aiming for 7am to 9pm working hours, in two shifts.

6.2 Clinical appraisal

- a. Patients who has procedures or chemotherapy infusions given will be assessed and continue to be monitored depending on the cases or the procedure planned.
- b. The medical officer in charge will be informed to assess the patient before any procedure is carried out.
- c. Patients who are still receiving treatment or being observed will again be seen by the medical officer before the office hour is over at 4.30 p.m. and cases that need to be reviewed will be passed over to the oncology medical officer on call.
- d. Before the Day Care Unit is closed at 9.00 p.m., any patient that warrants further assessment or observation will be transferred to the active ward or oncology ward.

6.3 Referrals

- a. Referrals to the unit are from the clinics and wards. Patients referred from the ward will be given an admission form upon discharge from the ward. The ward clerk shall inform the Day Care Unit nurse so that the names will be entered in the appointment book.
- b. Patients who are referred from the clinic will also be given an admission form for procedures to be carried out in the unit and the clinic nurse shall attend to the appointment to the unit.
- c. Direct admissions shall be registered straight away before coming in to the unit.
- d. For simple procedures i.e. administration of nebulisers, a small note will be given from the clinic to the staff in the Day Care Unit.
- e. Patients who do not need to be seen again in the Day Care Unit for their next follow up shall be referred back to the ward or clinic.

7. TRAINING

- a. The unit holds regular teaching activities for all medical personnel and patients to improve knowledge and skills.
- b. Regular department CME meetings for doctors and nurses are held

- c. The medical personnel are also encouraged to attend other training activities.
- d. Nurses are sent regularly for courses, conferences and in-house training is done through ward supervision.
- f. Health education sessions are given to patients by nurses and doctors as and when the need arise.

8. UNIT MEETINGS

- a. Unit meetings shall be held to discuss problems and its solutions.
- b. Problems that cannot be solved during the meetings will be brought up to the matron or to the department meeting.

9. WHOLE HOSPITAL & DEPARTMENTAL POLICY

Relevant aspects of the Paediatric Department General Policies and Whole Hospital Policies shall be complied with.

PEDIATRIC INTENSIVE CARE UNIT POLICIES

1. INTRODUCTION

The Pediatric Intensive Care Unit (PICU) and Pediatric High Dependency Unit (PHDU) is a multidisciplinary unit covering all specialties in the hospital and accepts patients up to age 18 years from A&E, wards and operating theatres from within the hospital and other hospitals within and outside the state.

The unit provides intensive care and support of vital systems in infants and children who have acute, often reversible, life-threatening disease. Most children have a potentially reversible life-threatening illness or injury that if successfully treated, will restore the child to a normal and productive life.

The PICU and PHDU provide special expertise and facilities for the support of vital functions and utilize the skills of medical, nursing and other staff experienced in the management of these problems. The management of the PICU and PHDU is the responsibility of the Pediatric Intensivist or Pediatrician under the Department of Pediatrics.

The PHDU is located next to the PICU and acts as a step down unit but in hospitals without PICU, a PHDU will be set up in the Pediatric General Ward.

2. OBJECTIVES

- 2.1 To provide life saving, resuscitative, diagnostic and curative care for critically ill children up to the age of 18 years.
- 2.2 To minimize morbidity and mortality in critically ill children.
- 2.3 To maintain good communication between staff and
 - other departments
 - patients families

3. SCOPE OF SERVICES

- 3.1 Provision of tertiary care for all infants and children up to 18 years of age with acute often reversible life threatening diseases which consists of the following:-

- 3.1.1 Ventilatory support including invasive, high frequency and non-invasive ventilation.
- 3.1.2 Cardiovascular intensive care monitoring and support
- 3.1.3 Post-operative surgical care
- 3.1.4 Support of other organ systems such as using nitric oxide, continuous veno-veno hemofiltration, intracranial pressure monitoring, EEG monitoring
- 3.1.5 Retrieval system that facilitates the safe and timely transport of critically ill children to the PICU and PHDU
- 3.2 Provide educational programmes in emergency and pediatrics critical care for primary care and referring physicians and nurses such as the Neonatal Resuscitation Programme (NRP), Paediatric Advance Life Support (PALS) and Advanced Paediatric Life Support (APLS)
- 3.3 Training of paediatric medical officers and paediatric nurses in paediatric critical care
- 3.4 Training of paediatricians as paediatric intensivist
- 3.5 Implement audit, registry, research and continuous professional development of staff members

4. ORGANISATION

- 4.1 The unit shall be headed by the senior pediatric intensivist working together with other paediatric intensivists, clinical specialists and paediatric nursing staff. If there is no paediatric intensivist, the unit will be run by a paediatrician with special interest in intensive care.
- 4.2 The number of consultant paediatric intensivists will depend on the workload and availability of personnel.
- 4.3 The PHDU will be run by paediatricians in hospitals without intensivists and where there are not enough intensivists.
- 4.4 The medical officers working in the unit will be deployed from the common pool in the Paediatric department and rotated from

various institutions for further paediatric intensive care training. There should be 24 hour coverage by at least one in-house medical officer on call for the PICU. This applies to the PHDU as well.

- 4.5 The paediatric intensivists and paediatricians are responsible for the total management of the patients and will provide 24 hour coverage. Supporting specialists from other specialties shall be available for consultation.
- 4.6 All patients referred to the PICU and PHDU shall be seen immediately and life supporting therapy instituted immediately.
- 4.7 A nursing sister with post-basic qualification in intensive care will head the nursing staff in PICU and PHDU.
- 4.8 A one nurse to one patient ratio for ventilated patient in the PICU and one nurse to two patients ratio for non-ventilated patients is a critical care requirement and should be implemented.
- 4.9 Nurses working in the PICU and PHDU should have post- basic qualification in paediatric and critical care nursing. In the interim period, the nurses working in the above units should be supervised, credentialed and privileged according to set standards in the log book.
- 4.10 Other allied health and support staff such as pharmacists, physiotherapists, radiographers, dietitians, technicians including biomedical engineering and scientific officers, cleaning staff, social workers, occupational therapists, counselors, interpreters, secretarial, hospital attendant and clerical staff shall be assigned to the unit by the respective departments.
- 4.11 Assistant Medical Officers shall be in-charge of maintaining and setting up of equipments, haemodynamic and respiratory laboratory services and shall be on call for 24 hours

5. OPERATIONAL POLICIES

5.1 Admission

- 5.1.1 All referrals to the Pediatric intensive Care Unit shall be

discussed with the Pediatric Intensivist or Pediatrician in charge.

5.1.2

Admission criteria for PICU:

a. Intensive Care Dependent Therapy

- Ventilation; invasive and non-invasive
- Tracheostomy
- Continuous Venovenous Haemofiltration
- Acute hemodialysis/ plasmapheresis
- Vasoactive drug infusion
- Initiation of IV thrombolytic therapy

b. Invasive monitoring

- Invasive haemodynamic monitoring and intracranial pressure monitoring

c. Risk of critical event

- Respiratory failure
- Upper airway obstruction
- Lower airway obstruction
- Acute encephalopathy and GCS <10
- Severe polytrauma
- Risk of life threatening event; apnea and arrhythmia
- Severe metabolic, fluid and electrolyte derangement
- Sepsis and shock
- Post- operative care for high risk patients
- Progressive neuro-muscular disorders
- Malignancies with acute illness

5.1.3

Admission criteria for PHDU:

- Physiological instability or potential for physiological instability
- High nursing intensity and requiring high skill level
- High medical input required for physiological review
- Continuous electronic monitoring
- Step down care from PICU.

- 5.1.4 The paediatric medical officer must clerk the case and discuss with the specialist. There should be good documentation in the clinical notes.
- 5.1.5 All critically ill patients must be immediately notified to the paediatric Intensivist/ paediatrician for appropriate stabilization.

5.2 Continuity of Care

- 5.2.1 The care of the patient in PICU/PHDU shall be the primary responsibility of the Paediatric Department.
- 5.2.2 In the event where another unit is involved in the care of the patient the PICU team will coordinate the care and endorsed the treatment.
- 5.2.3 Consultations shall be sought from relevant specialists when the need arises e.g. nephrologists, cardiologist or surgeon, preferably with but may not require prior consultation with the primary unit. However there shall be discussion between paediatric intensivists/ paediatricians and other involved specialists regarding the management of the patient.
- 5.2.4 A handover round in the morning and evening should be carried out by the specialist/paediatric medical officer on call to the specialist/ in-house paediatric medical officer in charge of PICU during working hours and including weekends and public holidays.
- 5.2.5 During handover, problems are highlighted including overnight problems, hemodynamic status, recent investigations, medications and ventilator settings.
- 5.2.6 The paediatric Intensivist/ pediatrician will do regular rounds with the paediatric medical officers and will be responsible for treatment plan, investigations and subsequent management including continuous monitoring of fundamental variables for every ill child.

5.2.7 All invasive procedures should be performed by paediatric medical officers who have been credentialed and privileged and also by the paediatric intensivists and paediatricians.

5.2.8 Parents should be informed of the child's condition as soon possible and will be updated regularly.

5.3 Discharge

5.3.1 Discharge criteria from PICU

- Patients are discharged when their need for intensive treatment is no longer present and there is no risk of deterioration or any active interventions required.
- Patients are discharged when their need for intensive monitoring is not present.

5.3.2 The patient may be discharged to the Pediatric High Dependency Unit or general ward depending on the condition of the patient and the bed situation.

5.3.3 The decision to discharge a patient will be the responsibility of the paediatric intensivist.

5.3.4 The discharge summary has to be completed prior to transfer out of the patient to the wards.

5.3.5 At the time of discharge, there must be complete handover of the patient to the ward doctors and nurses by the PICU doctors and nurse respectively.

5.4 Policy regarding Death in the PICU

5.4.1 The confirmation of death shall be done by the PICU medical officer.

5.4.2 The paediatric intensivist / paediatrician and the primary unit doctor on duty shall be informed of the death as soon as possible.

5.4.3 Death certificate and burial permit shall be signed

by the primary unit and in the event of medico legal cases requiring post mortem by the forensic doctor. All medico legal cases should be notified to the police by the ICU staff.

5.4.4 Consent for post mortem should be obtained from the parents as soon as possible except in medico legal cases.

5.4.5 Post mortem should be done for the following types of deaths:-

- Trauma death (MVA)
- Homicide / suicide
- Suspected Non-accidental injury
- Death from unnatural cause
- Where cause of death is unknown

5.4.6 Brain death :-

Confirmation of brain death should be done by 2 specialists not involved in organ transplant in accordance with Brain Death Consensus Guidelines.

Time of death is at the time of confirmation of brain death (second test). Patient's parents shall be informed of the brain death and organ donation issue should be discussed. Ventilator shall be switched off after confirmation of brain death if there is no consent for organ retrieval.

5.5 Referral and Transfer

5.5.1 Inter Hospital Transfer

- Patients who are referred to PICU where a bed is not available, shall then be referred to another PICU in the region. The coordinator shall be the PICU team.

5.5.2 Intra Hospital Transfer

- In the event that there is no critical care bed available within the hospital facility, provision to transfer the patient to another hospital facility shall be arranged.

5.6 Withdrawal of intensive therapy

5.6.1 When the patient has failed to respond after a period of intense treatment and further treatment is deemed futile resulting in prolonged care and undue suffering, serious consideration should be given to withdrawal of therapy.

5.6.2 This is done after joint discussion between the relevant disciplines involved with care and the rationale explained to the parents and relatives in accordance with the guidelines on withdrawal of care.

5.6.3 Intensive care therapies that are no longer indicated in such circumstances include :-

- CPR
- Dialysis
- Inotropic support
- Antibiotic therapy
- Parenteral nutrition
- Mechanical ventilation
-

5.6.4 The removal of life support should not be regarded as an abandonment of the patient by the healthcare team.

6. INFECTION CONTROL

The unit should adopt the guidelines as outlined in the Critical Care Medicine Section statement on Infection Control in the Intensive Care Unit. Infection control is supervised and regulated by the infection control nurse and team.

7. AUDIT

Audit shall consist of monthly mortality and morbidity discussions.
Paediatric Registry should be implemented.
Research should be encouraged.

8. TRAINING AND CONTINUING MEDICAL EDUCATION

a. Paediatric Intensive care training. (Please refer to document on training of Paediatric Intensive Care.)

b. Medical Officers

This will be in the form of active clinical work in paediatric intensive care, case discussions and teaching rounds.

c. Nurses

This will be done on the job training. Ideally all nurses should have undergone post-basic paediatric and critical care nursing. Continuous nursing education is encouraged. A post-basic paediatric critical care nursing curriculum should be established and the ideal duration is 1 year at PICUs with intensivists.

9. OTHER OPERATIONAL POLICIES

- a. National Organ, Tissue and Cell Transplantation Policy
- b. CPG on withholding and Withdrawing of Life Support in Children 2005
- c. End of Life Issues and Management in Perinatal Care Manual
- d. Critical Care Medicine Section Statement On Infection Control Measures In The ICU 2004

GENERAL PAEDIATRIC WARD STAFF AND EQUIPMENT NORMS

A. STAFFING NORMS :-

1. Medical Staff

a. General Paediatric Wards (28 Bedded)

	Number
Paediatrician	2 FTE
Medical Officers	1:8 beds
House Officers	1:8 beds

Note : FTE-Full Time Equivalent

b. Day Care Unit

	Number
Paediatrician	1 PT
Medical Officer	1:5 beds
House Officer	1:5 beds

Note : PT-Part Time

2. Nursing

a. General Ward (28 bedded)

	Number
Sister	2
Staff Nurse	Total 28 a.m. 7 (1:4) p.m. 7 (1:4) Night 5 (1:6) (Night off 5; Leave, Course, CPD 4)

b. Day Care Ward

	Number
Sister	1
Staff Nurse	1:4

3. Support Staff

a. Attendants (Penolong Perawatan Kesihatan)

7 per paediatric ward	(28 bedded). (a.m. 2; p.m. 2; night 1; night off 1; leave 1).
1 per day care ward	(10 bedded).

b. Other support services available to serve the paediatric wards:-

- Physiotherapist
- Pharmacist
- Social Worker
- Play Therapist (Most hospitals use a trained Attendant).
- Occupational therapist
- Nutritionist/Dietician
- Radiographers
- Clinical Psychologist
- Counselor
- Hospital Teacher

B. Equipment :-

1. Fittings in the Ward

Medical gases	Each bed: 1 Oxygen, 1 suction outlet
Electrical points for each bed	a. Non acute bay: 4 normal points; 2 emergency points. b. Acute bay: 6 normal points; 4 emergency points.

2. Beds and Cots For 28 Bedded Ward

For Acute Bay	Intensive Care Bed
For Non Acute Bay areas	Standard size children's cot. Adult beds if catering to bigger children and adolescences
8 Baby Bassinets (in hospitals without separate neonatal ward)	
28 Parent's "Chair cum Bed"	

3. Equipment for a 28 bedded general paediatric ward.

Item	Numbers
Volumetric infusion pumps	1 every 2 beds
Syringe pumps	1 every 2 beds
Drip Stands	1 every 2 beds
Digital Thermometer	1 per bed with 10% spares
Ear Thermometer	1 per 8 beds
Pulse oximeter	1 per 4 beds
O2 analyser	-
Low-flow O2 flowmeters	1 per 4 beds
High-flow O2 flowmeters	i) Acute bay: 1 for every bed. ii) Non acute bay: 1 per 4 beds
Weighing scales	1 infant, 1 sitting and 1 standing scales
Stadiometer	1 for height, and 1 for length measurements
1 Resuscitation cart	With • Paediatric sizes tracheal tubes • Paediatric size laryngoscopes • Paediatric size ambubags and masks • Paediatric sized airways.
Wheelchairs	(1 adult; 3 children)
Electronic BP Monitors with different size cuffs	4
Manual BP sets with different size cuffs	2
4-channel special care monitor (ECG, Resp, O2 sat, NIBP) - for acute bay	4
ECG machine	1
Radiant Warmer	2
Trolleys with O2 tank stand and drip stand	2
Portable Suction Machine (if there are no built-in wall suction outlet)	8
X-ray Viewer Box	4
Thoracic suction pump	1
Medicine Trolley	1
Ward Round Trolley	2
Ripple Mattress for Acute Bay	1
Wall Mounted Electric Ophthalmoscope for Acute Bay	1
Portable X-Ray Lead Shield.	1

4. General Paediatric Ward Treatment Room Fittings and Equipments

Treatment Room: 2 Couches per Room	Per Couch: a. Medical Gas: 1 Compress Air and 2 Oxygen Point b. 1 Suction point or 1 portable suction machine. c. 1 Portable 4 channel special care monitor (ECG, Resp, O2 sat, NIBP) able to detect at low perfusion. d. Ceiling Mounted Examination Lamp. e. 2 Drip Stands. f. 1 Volumetric infusion pump g. 2 Syringe pumps
1 Resuscitation cart	With :- • Paediatric sizes tracheal tubes • Paediatric size laryngoscopes • Paediatric size ambubags and masks. • Paediatric sized airways
1 Defibrillator with children's paddles and voltages.	

5. Per Paediatric Department for use in General Wards

(i.e. excluding any found in the NICU or PICU)

1 Ultrasound Machine with paediatric transducer (For cardiac, abdominal and head)
1 Blood Gas Electrolyte Analyser
1 Transport ventilator with portable 4 channel special care monitor. (For temporary ventilation before transfer to PICU)
1 Transport incubator (with ventilator if possible)

NEONATAL INTENSIVE CARE UNIT STAFF AND EQUIPMENT NORMS

Staffing in Neonatal wards are based on the number of births in the hospital and expected outborn referrals, and the level of care in the neonatal and postnatal wards.

Definition of Level of Care

Level IV - equivalent to level III plus requiring subspeciality management eg. from nephrology, neurosurgery, paediatric surgery

Level IIIb (High dependency) Intensive Care beds:

For neonates requiring endotracheal intubation for assisted ventilation, intra-arterial blood pressure monitoring, continuous cardiorespiratory monitoring, parenteral nutrition, central venous catheterisation, transcutaneous blood gas and oxygen saturation monitoring and neonates requiring stabilisation following major surgery

Level IIIa (Low Dependency) Intensive Care beds:

For neonates requiring CPAP, continuous cardiorespiratory monitoring, intraarterial blood pressure monitoring, parenteral nutrition, central venous catheterisation, oxygen therapy in excess of 40%, acute surgical nursing

Level IIb (High Dependency) Special Care beds:

For neonates requiring peripheral intravenous therapy, simplified cardiorespiratory monitoring, apnoea monitoring, oxygen not usually in excess of 40%, chronic oxygen dependency and surgical nursing

Level IIa (Low Dependency) Special Care beds:

For convalescent preterm neonates, or neonates requiring observation for transient problems, phototherapy, investigatory procedures and frequent feeding

Level I (Neonatal care in postnatal wards) - well normal term babies placed together with their mothers in postnatal wards and regarded as an inpatient. Some of these babies will be receiving treatment for completion of antibiotics, continuation of phototherapy for mild neonatal jaundice, or monitoring of glucose. There should be separate set of nursing staff and doctors for newborn babies and mothers.

A. Recommended staffing norms

Medical personnel	Norm	Example for hospital with 15,000 births per year
Neonatologist	1 per 3000 births per year	5 FTE
Medical officers	6 per 5000 births per year	18 FTE
House officers	4 per 5000 births per year	12 FTE
Nursing personnel	Norm	Example for hospital with 15,000 births per year
NICU		1 NICU
Sister	1 per 5000 livebirths	2
Staff nurse	1 staff nurse :1 Level III /IV bed	Total 75 15 per shift per 15 beds Total = 15X5=75 (including nights off/ leave/course)
	1 staff nurse : 4 Level IIb	Total= 20 4 per shift for 15 beds
Allied Health	Norm	Example for hospital with 15,000 births per year
Physiotherapist		1
Respiratory technician (Medical assistant)		2
Infection control nurse		1
Pharmacist		1
Lactation nurse		2
Hearing screening/ ROP nurse		1
Nutritionist		1 PT
Social worker		1 PT
Ultrasonographer		1 PT
Counselor		1 PT
Radiographer		1
Ward clerk		1

Special Care Nursery (30 bedded)	Norm	Per SCN ward
Sister	1 per SCN	1
Staff nurse	1 staff nurse : 6 Level II a beds	Total=25 per SCN 5 per shift for 30 beds
Infection control nurse		1
Medical Assistant		1
Lactation nurse		1
Hearing screening/ROP nurse		1
Physiotherapist		1 PT
Nutritionist		1 PT
Pharmacist		1 PT
Social worker		1 PT
Ultrasonographer		1 PT
Radiographer		1 PT
Clinical psychologist		1 PT

B . Recommended bed norms

(Recommendation by the American Academy of Paediatrics and the American College of Obstetricians and Gynaecologists 2004 depending on the level of care.)

Level of care	Norm	Example for hospital with 15,000 births per year
Level III and IV	1.5 beds per 1000 births per year	22 beds
If Level III only	1 bed per 1000 births per year	15 beds
Level II b	1 bed per 1000 births per year	15 beds
Level II a	4 beds per 1000 births per year	2 X 30 bedded ward
Level I	20-24 beds per 1000 births per year	300-360 beds in O&G wards - Rooming in with mothers.

Refer to end of section for definitions of level of care

C. Equipment Norms for Neonatal wards

These are contemporary norms recommended to meet the needs according to our current stage of development. They should be revised at regular intervals.

Neonatal Intensive Care Unit (NICU)

Per Level III/IV bed	
1	Table reanimation infant servo controlled skin temp open system height adjustable with resuscitation for every two Level IIIB beds
1	Intensive Care Incubator
1	Pulse oximeter per 4 beds
1	6 channel cardiorespiratory monitor per level IIIB bed
1	4 channel cardiorespiratory monitor per level IIIa bed
1	Ventilator (high-end and half the number of total ventilators with high frequency module per Level IIIB bed)
1	Humidifier
1	High Flow meter for oxygen (0-15L/min)
1	High Flow meter for air
1	Low Flow meter for oxygen (0-5 L/min)
1	Resuscitation bag/ T piece resuscitator and mask
1	Laryngoscope
1	CPAP delivery system per IIIA bed
1	Intensive phototherapy lights
1	Fluid management system for 8 pumps
4	Syringe pumps
1	Volumetric infusion pump
1	Stethoscope
1	Thermometer

Level II bed	
(i) Per level II bed	
1	Stethoscope
1	Digital Thermometer with 10% spare
1	Intensive phototherapy light
2	Syringe pumps
1	Bassinet with mattress and storage space

(ii) Per 2 level II beds	
1	Infant incubator
1	Head box
1	Low flow meter with probe for oxygen (0-5L/min)
1	Low flow meter with probe for air (0-5L/min)
(iii) Per 4 level II beds	
1	Doppler BP monitor
1	Volumetric pump and drip stand
1	Humidifier
1	Oxygen blender
1	Low flow meter with probe for oxygen (0-1L/min)
1	Laryngoscope
1	Pulse oxymeter
1	Resuscitation bag and mask
1	Free standing radiant warmer
1	LED phototherapy lights

Per Resuscitation Bed	
1	Table reanimation infant servo controlled skin temp open system height adjustable with resuscitation
1	4-channel intensive care monitor
2	Syringe pumps
1	Volumetric infusion pump
1	Laryngoscope
1	Resuscitation bag and mask
1	Stethoscope
1	Thermometer
1	High Flow meter for air
1	High flow meter for oxygen

Per Neonatal Intensive Care Unit	
2	Nitric oxide delivery system per NICU state hospitals and referral centres
2	HFOV stand-alone machines per NICU state hospitals and referral centres
1	High frequency jet ventilator
2	Transport Incubators
1	Transport Ventilator
1	Blood gas analyser with Hb, electrolytes, glucose, lactate, bilirubin, metHb
1	Ultrasound (Cardiac Echo with colour Doppler if level III units)
5	Free standing radiant warmer
1	Transilluminator
1	Bedside glucose analyser per 10 beds
1	Oxygen analyser
1	Phototherapy irradiance meter
1	Transcutaneous bilirubinometer
1	Automated Acoustic Brainstem Evoke Response machine
2	Cerebral function monitor
2	Hypothermia therapy machine with servo control
2	Portable suction for chest drains
2	Portable suction machines
4	Blood warmer
3	Infant weighing scale
1	Defibrillator
1	Emergency trolley
2	Breast pumps
1	Refrigerator from medications
1	Refrigerator for milk formula
1	Refrigerator for expressed breast milk
4	Continuous suction pump with regulator
1	Cabinet for hot air drying of tubings
1	Ultrasonic tank washer
4	Mobile radiant warmer
1 (optional)	Centrifuge & bilirubinometer

Special Care Nursery (SCN)

1. Equipment per bed according to No. and of Level of care as given above

2. Additional equipment per SCN ward:

3	Table reanimation infant servo controlled skin temp open system height adjustable with resuscitation
3	Breast pumps
1	Phototherapy irradiance meter
2	Milk fridges
1	Refrigerator for medications
1	Transport Incubator
1	Ultrasound machine
1	Bedside glucose analyser per 10 beds
1	Transcutaneous bilirubinometer
1	Otoacoustic Emission (OAE) machine
2	Portable suction machines
2	Blood warmer
2	Infant weighing scale
1	Defibrillator
1	Emergency trolley
4	Mobile Radiant warmer
1	Oxygen analyser

Equipment for exchange transfusion room, treatment room and other non-clinical area not included. Trolleys, spare equipment like phototherapy lights, incubator, ventilator, magill forceps, laryngoscope

Milk kitchen (size and no. depend on capacity required):

Milk pasteuriser
Bottle washer
Steriliser
Water dispenser and
Milk bottles & teats
Refrigerator

Electrical, Gas Supply, and Mechanical Needs:-

Electrical	
Per level III/IV bed	2 UPS, 6 E, 8 N
Per level IIb	4E, 4N
Per level IIa, per resuscitation bed	1E, 3 N
Per level I	2 N
Gas Supply	
Per level III/IV bed	2 air, 2 O ₂ , 2 vac
Per level IIb, per resuscitation bed	1 air, 2 O ₂ , 1 vac
Per level IIa, exchange transfusion and treatment room	1 O ₂ , 1 vac

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ACKNOWLEDGEMENTS

Medical Development Division would like to acknowledge the contributions of the following individuals and groups towards the development of this document;

Y.Bhg. Dato' Sri Dr. Hasan bin Abdul Rahman, Director General of Health Malaysia, Y.Bhg. Datuk Dr. Noor Hisham bin Abdullah, Deputy Director General of Health (Medical) and Y.Bhg. Dato' Dr. Azmi bin Shapie, Director Medical Development Division for their leadership and guidance,

Dr. Hussain Imam bin Haji Muhammad Ismail, National Advisor for Paediatric Services for his dedication, leadership and expertise to the Ministry of Health towards the publication of this document,

And to all other parties who have directly or may indirectly involved in the publication of this document.



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ISBN 978-983-3433-53-7

A standard 1D barcode representing the ISBN number 9789833433537.

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