

Program Overview and Objectives

The Child Health Training Program in Sultanate of Oman is organized under the auspices of Oman Medical Specialty Board (OMSB). It requires the successful completion of four years of full-time training in accredited centers and regular evaluations and formal examinations to ensure that candidates will obtain the knowledge, skills and experience required for the provision of high quality care in Child Health.

Mission:

The Child Health Scientific Committee will strive to ensure that all Child Health trainees possess sound knowledge; skills and experience through uniform high quality training enable them to be competent pediatricians providing the highest level of quality care in Oman.

Vision:

- To have well-trained, skilled and competent Omani Pediatricians capable of providing excellent Child Health services and care for all Omani children.
- To improve the health and health care of all children in Oman

General Objectives:

- To develop sound knowledge in the principles and practice of Pediatrics and Neonatology
- To develop competence in taking history and performing complete physical examination.
- To develop the skills of summarizing a case and be able to formulate a sound working diagnosis, order appropriate laboratory tests logically and conservatively in order to make accurate diagnosis and formulate a sound management plan based on evidence-based practice
- To be able to provide continuous care to families on a long term basis when required
- To be able to recognize and manage effectively common emergency and life-threatening situations
- To be able to communicate effectively with colleagues and other health care team members both in Hospital and Community setups.
- To be able to accept, discuss and advise the physicians calling for referrals from the peripheral health care facilities
- To be able to effectively teach, train and supervise the work of junior colleagues and other health care staff
- To be able to effectively communicate with the family on various health care issues including the counseling on genetic diseases

- To be able to provide appropriate preventive, social and community care
- To be able to assume the role of a strong child advocate
- To be able to maintain good orderly and informative medical records
- To be able to educate and update himself/herself and others with the current and up-to-date knowledge and eagerly participate in the departmental and Hospital CME programs
- To be able to recognize various issues requiring medical research and develop an appropriate plan to conduct one
- To be punctual and able to attend to his duties promptly and willing to co-operate in performing extra duties without hesitation if required in times of untoward situations
- To develop high moral and ethical standards

Resident Admission Requirements

- Resident must be a holder of Bachelors Degree in Medicine & Surgery or equivalent from a University recognized by the OMSB.
- Resident must have completed a year of internship.
- Resident must be of a good conduct & medically fit for the specialty chosen.
- Resident must provide three letters of recommendation from three consultants with whom he/she has worked commenting on his/her abilities.
- Resident must submit a letter of approval from his/her sponsor confirming permission to join the OMSB Specialty Training Program on full time basis for the entire period of training.
- Resident must pass the interview.

Program Structure

The program extends over a period of four years. The first two years focus mainly on Basic Specialty Training and the following two years focus on Higher Specialty Training. Residents who fail to satisfy the conditions for completion of training and certification are allowed one extra year to fulfill those conditions. If still not fulfilled, they will be asked to leave the program.

The Academic year will commence on the 1st of September. Each Academic year will consist of 13 blocks and the duration of each block is 4 weeks. Each rotation will start on the 1st Saturday of the block and ends on the last Friday.

Phase One: Basic Specialty Training

Year 1

General Pediatrics	6 blocks
Neonatology	3 blocks
Accident & Emergency	2 blocks

Ambulatory Pediatrics 1 block
 Subspecialty 1 block Hema/Onco

Year 2

General Pediatrics & High Dependency 3 blocks
 Neonatology 2 blocks
 Pediatric Intensive Care 2 blocks
 Accident & Emergency 2 blocks
 Ambulatory Pediatrics 1 block
 Subspecialty 1 block

** The Ambulatory rotation will be one block Well Baby Vaccination and Development Clinic and one block General Pediatric Clinic at a Primary Health Centre.*

Phase Two: Higher Specialty Training (R3 & R4)

Year 3

General Pediatrics 4 blocks
 Neonatology 3 blocks
 Pediatric intensive Care 2 blocks
 Accident & Emergency 1 block
 Ambulatory Pediatrics 1 block
 Subspecialty 2 blocks

Year 4

General Pediatrics 2 blocks
 Pediatric intensive Care 2 blocks
 Neonatology 1 block
 Accident & Emergency 2 blocks
 Ambulatory Pediatrics 1 block
 Elective 2 blocks
 Subspecialty 3 blocks

- * The Ambulatory rotation will be one block Pediatric Clinic at a secondary health care level (Baushar Poly Clinic) and one block Subspecialty clinics at Royal Hospital*
- * For the subspecialty rotations, Nephrology, Neurology and Cardiology are compulsory one block each.)*

Overall View of Program Structure

Specialty	Year 1 (blocks)	Year 2 (blocks)	Year 3 (blocks)	Year 4 (blocks)	Total (blocks)
General Paeds	6	3	4	2	15

High Dependency	--	2	--	--	2
Neonatology	3	2	3	1	9
PICU	--	2	2	2	6
A&E	2	2	1	2	7
Ambulatory	1	1	1	1	4
Subspecialty	1	1	2	3	7
Elective	--	--	--	2	2

Year	Blocks in Each Specialty												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Year 1	General Pediatrics					Neona.			A&E		Amb	SS	
Year 2	Gen. Pediatrician				Neona.		PICU		A&E		Amb	SS	
Year 3	Gen. Pediatrician			Neona.			PICU		A&E	Amb	SS		
Year 4	Gen. Ped.	Neona	PICU		A&E	Amb	SS			Elective			

Compulsory Subspecialties

These include one month Hematology/Oncology in phase one training and Cardiology, Neurology and Nephrology one month each in phase one or two training.

Other Subspecialties

Residents may select, with the approval of the program director, any of the remaining subspecialties:

- Allergy/Immunology
- Endocrinology
- Gastroenterology
- Metabolic Disorders
- Infectious Disease
- Respiratory
- Rheumatology

The total time spent in any subspecialty rotation should not exceed two months.

Electives:

Two elective rotations in Phase two of the program would be allowed. The resident will have a choice of either doing more of the previously mentioned subspecialties or other areas related to pediatrics such as Dermatology, ENT, Pediatric Surgery, Pediatric Radiology, Pediatric Psychiatry or a Research Project

The Mentor

Each resident has an assigned mentor from the teaching faculty to provide advice, coaching, encouragement, feedback and support, in addition to discussing advanced training plans at the time of passing examination.

The mentor will also have an important role as an advocate of residents who have insufficient support from one or more supervisors.

Graded Responsibility for Each Academic Year

Year 1 (R1)

The year focuses on general pediatric care plus exposure to neonatal, ambulatory and emergency care.

Residents will fulfill the following responsibilities:

- Acquiring the experience and education related to all aspects of the care of the hospitalized pediatric patients.
 - Learning common pediatric disease, their diagnosis and management
 - Practicing good history taking and thorough physical examination in children of various age groups
 - Writing clear admission notes and discharge summaries.
 - Learning counseling on various patient management issues and breaking of bad news

- Presenting efficiently in the morning meeting and hand-over rounds and participating in the departmental CME activities.
- Learning common pediatric ambulatory problems and participating in ambulatory pediatric patient care
- Getting exposed to patients with hematology/oncology problems and participating in their care
- Learning common neonatal problems, their diagnosis and management and participating in the care of normal and sick newborns
- Learning and managing common pediatric emergencies
- Learning and practicing various pediatric and neonatal procedures
- Complete BLS and NALS Courses
- Self-directed learning skills and preparation for examinations

Year 2 (R2)

The year focuses on revising and updating the above issues and adopting a more decision making role in day-to-day practice. Residents will also get exposed to intensive pediatric care.

Residents will fulfill the following responsibilities in addition to solidifying the above:

- Time management and decision making
- Acquiring professional behavior and working as part of a team
- Supervising the work of interns and R1 residents
- Teaching interns and undergraduate students
- Learning to recognize an acutely sick child and to manage various problems in PICU setting
- Complete ACLS Course
- Conducting Ambulatory Clinics under supervision
- Learning to write medical reports and other communications
- Getting exposed to subspecialty training

By the end of this year, residents should be able to work as registrars in the Pediatric and Neonatal wards and the Accident and Emergency Department.

Year 3 (R3)

The year focuses on taking higher responsibility in patient care and decision making and adopting a greater supervisory and teaching role to junior residents plus broadening knowledge through exposure to subspecialty rotations.

Residents will add on the following responsibilities to the above:

- More subspecialty training exposure to provide depth to their knowledge.
- Assuming a more independent role in patient care in outpatient, inpatient, emergency and ambulatory settings.
- Attending to referral cases from other units

- Teaching and supervising interns, R1 and R2 residents
- Designing a research project or audit with the assistance of a Senior Doctor
- Preparing residents duty roster and CME program calendar

Year 4 (R4)

The year focuses on achieving the role of an independent pediatrician making decision on all day-to-day patient management and administrative issues and functioning as a leader to junior residents. Residents will also have a wider exposure to subspecialty rotations.

Residents will add on the following responsibilities to the above:

- Conducting independent ward rounds and OPD clinic
- Assuming a more independent role in patient intensive care
- Attending refresher ACLS, BLS and NALS Courses if feasible
- Presenting a research project by the end of the year
- Formally teaching and supervising students, interns and junior residents
- Spending two rotations as elective time in any clinical or academic pursuit

By the end of this year, residents should be able to function as competent pediatricians providing the highest level of quality care.

Educational Activities

- Morning Report
- Daily Inpatient Rounds
- Weekly Pediatric Grand Rounds
- Monthly Pediatric Journal Club
- Monthly Mortality and Morbidity Meetings
- Weekly Radiology Meetings
- Monthly Mock CPR Sessions
- Weekly didactic lectures by Senior Pediatricians
- Other Relevant Activities

Residents should attend at least 70% of the above activities in an academic year to be eligible for promotion from one level of training to a higher level.

Each resident should present the following minimum educational activities/clinical year:

- a) 1 Journal Club
- b) 1 Grand Round

- c) 1 Mortality Review
- d) Attend twice CPR Mock

The members of the Scientific Committee in both Royal Hospital and SQUH will work together to make sure that the residents would not duplicate some activities (e.g. doing 2 Journal Clubs) while missing the other activities (e.g. mortality review... etc).

Core & Subspecialty Curriculum Lectures:

In addition to the above teaching activities, residents will have two protected hours of teaching once a week from 2 - 4 pm. Teaching activities will stop during Eid and official holidays, the holy month of Ramadan and two months in the summer (June & July).

The following topics will be covered:

Year One

Normal growth & development

Fluid therapy

Evaluation of the nutritional status of infants and children and calculation of their nutritional requirement

Approach & management of a child with failure to thrive

Immunization in Oman

Neonatal Hyperbilirubinemia

Common pediatric clinical emergencies

Common pediatric surgical emergencies

Common infectious disease affecting children

Approach to a septic child

Neonatal Sepsis

Assessment of development, hearing and vision

Approach to a child with pallor

Management of acid base imbalance

Management of electrolyte imbalance

Seizures in children

Hyper/ Hypocalcemia

Neonatal respiratory distress

Approach to a child with hematuria

Approach to a child with vomiting

Approach to a wheezing child

Approach to a child with acyanotic heart disease

Approach to a child in shock

Perinatal asphyxia and birth trauma

Approach to a dysmorphic child

Communication skills and breaking bad news

Approach to a child with bleeding tendency

Approach to a child in coma

Approach to a child with diarrhea, acute/chronic
Prematurity and low birth weight

Year Two

Acute life threatening illness and death
Life threatening infections in children
Respiratory failure
Neonatal Surgical problems
Rickets
Introduction to metabolic disease
Approach to chronic cough
Approach to a child with cyanotic heart disease
Approach to a child with hypertension
Approach to a child with jaundice
Anaphylactic shock and urticaria
Fever without focus and fever of unknown origin
Approach to a child with multiple trauma
Diabetes Mellitus and Diabetic Ketoacidosis
Hypoglycemia
Bronchial asthma
Neonatal feeding problems and nutritional support
Hemoglobinopathies: Sickle Cell Disease & Thalassemia
Approach to a child with primary and secondary headache
Approach to a child with chronic arthritis
Near drowning
Heart failure in children
Approach to genetic counseling
Growth retardation/short stature
UTI
Approach to a child with abdominal pain, acute/chronic
Acute and chronic hemolytic anemias common in Oman
Advanced airway management
Approach to a floppy child and acute flaccid paralysis

Year Three

Management of common arrhythmias in children
Long term followup of the preterm child
Poisoning and drug overdose
Perinatal and congenital infections
Common ENT conditions in children
Common Eye conditions in children
Approach to a child with goiter
Approach to a child with hematemesis
Leukemia and Lymphoma
Biostatistical methods and interpretation
Pneumonia and its complications

Cardiac causes and management of syncope
Approach to a child with non-progressive encephalopathy
Common metabolic disorders, presentation, diagnosis, and long term management
Near drowning
Common genetic disorders in children
Common Orthopedic conditions in children
Common skin conditions in children
Renal tubulopathies
Systemic Lupus Erythematosus
Congenital and acquired neutropenias
Atopy and Allergic rhinitis
Cystic Fibrosis
Inappropriate ADH Secretion and Diabetes Insipidus
Common childhood neuromuscular disorders
Approach to a child with bleeding PR
Clinical Epidemiology
Neonatal Screening Program
Approach to a child with proteinuria
Infective Endocarditis in children

Year Four

Approach to a child with developmental delay/mental retardation
Approach to a child with progressive encephalopathy
Interpretation of Pulmonary Function Tests
Research methodology
Snake and scorpion bites
Pubertal disorders, delayed / precocious puberty
Common solid tumors in children
Infection in the immunocompromised host
Renal failure, acute/chronic
Liver failure, acute/chronic
Principles of critical paper review
Juvenile dermatomyositis & juvenile scleroderma
Immunodeficiency syndromes
Congenital and chronic lung disease
Approach to a child with brain stem and movement disorders
Common post cardiac-operative complications and their management
Lysosomal Storage Disease
Approach to a child with ambiguous genitalia
Bone marrow failure syndrome and pancytopenia
Renal stones
Common G.I surgical conditions
Infections related to travel and their prevention
Approach to a child with recurrent infections
Obstructive sleep disordered breathing
Anaphylactic shock and urticaria

Approach to a child with cerebrovascular accident
Approach to a child with burns
Malabsorption
Thrombotic disorders
HIV infection

Procedures

Throughout their training, the residents are expected to perform satisfactorily, supervised by a senior doctor, the following procedures:

Abdominal paracentesis
Administration of intradermal, subcutaneous, intramuscular or intravenous injections
Arterial/venous sampling
Bag and mask ventilation
Bed-side measurement of glucose
Circumcision of a newborn
Electrocardiogram
Endotracheal intubation
Exchange transfusion
Foreign body removal
Gastric lavage
Incision and drainage of an abscess
Intercostal chest tube insertion and aspiration
Intraosseous needle insertion
Lumbar puncture
Nasogastric tube insertion
Percutaneous long- line insertion
Peripheral arterial / venous cannulation
Pneumothorax needle aspiration
Routine testing of urine
Suprapubic aspiration of urine
Suturing of simple cuts and wounds
Tracheostomy tube insertion/change
Umbilical artery and venous cannulation and sampling
Urinary catheterization

Procedures Related to Subspecialty Rotations

Administration of surfactant
Arthrocentesis
Basic lung function tests
Bone marrow aspiration
Bone marrow biopsy

Guthrie card specimen

Intrathecal administration of chemotherapy

Tuberculin Skin Test

Procedures performed should be documented in the resident's log book with the supervisor's signature.

Cardio Pulmonary Resuscitation (CPR) Training

Successful completion of Basic Life Support, Pediatric Advanced Life Support and Neonatal Resuscitation Courses is mandatory for the promotion from phase one to phase two of the training (R2 to R3).

Attendance of other conferences and workshops related to the residents training are encouraged.

Research Activities

Residents should present a paper or a poster in the final year to encourage research.

Evaluation and Promotion

- The academic year rotations will be given to the residents in advance.
- Residents will be spending their training periods between the accredited centres as per the Scientific Committee recommendations.
- The resident must complete 75% of the training period in each rotation for it to be valid and must attend at least 70% of the teaching activities in that academic year to be eligible for promotion.
- Monthly evaluations of the residents' performance by the supervising consultant using the approved evaluation forms will be sent to the program director.
- The 6 month and end of academic year reports by the program director will be sent to the Scientific Committee for approval and the final report will be submitted to the OMSB and the resident's sponsor.
- Annual examinations will be conducted for evaluation of the residents.
- Part One examination will be conducted after two years of training.
- Part Two (final) examination will be conducted after four years of training.
- The resident shall be promoted from one level to the next (e.g. R1 to R2) based on:
 - The total average of the periodical evaluation reports, representing 40% of the total evaluation
 - The result of end of year examination representing the other 60%
 - The resident must score a minimum overall average of 60%

Successful completion of Basic Life Support, Pediatric Advanced Life Support and Neonatal Resuscitation Courses is mandatory for the promotion from phase one to phase two of the training (R2 to R3)

(For evaluation forms see Appendix 2)

Examination Outline

1) End of Year Exam

The format of the exam

a) Written Exam

- A written examination of MCQ (Multiple Choice Question) type consists of 100 single best answers.
- The exam will be taken in May of each year but for those candidates who failed the 1st attempt may retake exam in August.
- The duration of exam is 2 hours.
- The passing mark for the exam, are as follows:

R1	40%
R2	50%
R3	55%
R4	65%

b) Observed clinical history and physical exam

- Each resident will undergo a supervised clinical exam.
- The duration of the exam is one hour.
- The exam can be taken at any time of the year but before the written exam.
- The passing mark of the exam is 60%.

2) OMSB Examination

All residents are expected to pass Arab Board Part I / MRCPH Part I by end of Second Year. If resident is unable to pass the exam at end of expected time, he will be given an extra year to do so and will be allowed to progress to R3 level. However, failure to pass the exam in the extra time allotted will result in failure to progress from R3.

3) Future Prospective:

OMSB BOARD EXAMINATION

- The exam will take place at the end of 4th year.

- The resident has to pass part I exam before taking the part II exam/final exam.
- The exam will consist of 3 parts:
 1. 15 OSCE stations.
 2. Written MCQ 250 (single best answer type) for 2.5 hours
 3. Essay Type: Short answers
- The passing mark is 65%.
- The residents are given 3 attempts to successfully pass the exam.
- Residents who failed the exam may retake within 6 months.
- The OSCE Exam can be adopted from MRCP Part II format.

On-Call Duty Policy

- The resident must not take more than one in-house call every 4 days averaged over a month, and maximum of seven in-house calls a month.
- A resident's shift must not exceed consecutive 24 hours and the resident should make sure that he/she hands over his/her patients to the next on duty group by 11AM.
- The weekend call must not exceed twice a month and each weekend call must be one day long - 24 hours - only.
- The resident should not take more than one home call every 3 days, and a maximum of 10 calls per month.

Vacations

- The resident shall be entitled an annual leave of 4 weeks in addition to a maximum of 10 days in lieu of Eid holidays, official holidays and emergency leaves if required to work during these holidays. Leaves during a rotation should not exceed 25% of the total duration of that rotation.
- The training period shall be extended for an equivalent period to compensate for sick leave, maternity leave and exceptional "emergency" leaves before the resident is awarded a certificate of completion of training.
- Annual leave which is not utilized in due time within the year shall not be transferred to the following year.
- The resident will be granted a leave for scientific purposes (attending scientific conferences and seminars, specialty examinations, etc.) not exceeding 7 days a year provided that resident presents the proof of attendance of such activities and had prior approval to attend from the Scientific Committee.

Transfer to another Medical Specialty

The Resident is allowed to transfer from one specialty to another if the following conditions are fulfilled:

- The approval of the resident's sponsor.
- The approval of the Scientific Committee of the specialty in which the resident is registered.
- The approval of the Scientific Committee of the specialty to which the resident wishes to transfer and the fulfillment of admission conditions for that specialty.
- The Scientific Committee of the new specialty shall recommend a credit, for the previous training period for the new specialty if applicable and specify the level at which the resident shall start.
- Transfer application shall be submitted at least four months prior to the end of the training year.
- ***No transfer from one specialty to another shall take place except at the beginning of the training year.***

Completion of Training and Certification

Completion of training shall be based on:

- The clinical ability and performance of the resident in the previous years assessed by the periodical evaluation forms
- The result of the final year examination
- The completion of the log-book

A certificate of successful Completion of Training and Examination will be formally awarded by the OMSB.

