

# Palestinian Pediatric Medicine Residency Program Training Curriculum December 2016

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# **Palestinian Pediatric Medicine Residency Program Training Curriculum**

This document is the fruit of the combined efforts, commitment and dedication of a small group of professionals who reviewed and revised the Palestinian Pediatric Medicine Residency Training Curriculum. The aim of this exercise is to raise the standard of post-graduate medical education in pediatric medicine nationally and so meet the health needs of children.

These efforts have been supported by the Palestinian Health Capacity Project (PHCP), funded by USAID, and implemented by IntraHealth International and Juzoor for Health and Social Development and the Palestine Medical Council, Palestinian Ministry of Health (PMoH).

This curriculum provides detailed technical information for the pediatric medicine residency program managed by the Palestinian National Residency Program under the auspices of Palestine Medical Council. The intent is that the curriculum will enhance the uniformity and standardization of pediatric medicine post-graduate medical education, according to evidence-based knowledge and practices, and ultimately contribute to improving the quality of care provided to Palestinian children.

Effective implementation of this curriculum is contingent upon the support of the Palestine Medical Council and clinical training institutions (e.g. PMoH and Non-Governmental Organizations (NGOs)) to ensure that sufficient resources (including but not limited to materials, equipment, human resources, management, supervision and monitoring) are available, and that residency program directors, clinical instructors and residents are oriented to its content.

## Foreword


It is my great pleasure to introduce the revised pediatric residency curriculum to our pediatric medicine educators and residents in Palestine. This curriculum responds to a national priority, identified in 2014 by key stakeholders in the medical community, to strengthen and standardize medical residency curricula in Palestine.

This curriculum is the second of many curricula to be developed in the future. The first was the general surgery residency curriculum that was completed and launched in all Palestinian Ministry of Health and NGO programs that offer general surgery residency over the last two years. The PMOH's vision is to standardize its teaching programs for all residencies and become a shining spot for medical professions education in Palestine and the region.

This curriculum will standardize the pediatric residency teaching program and approach in Palestine and produce high caliber competent pediatricians. It establishes a road map for educators and residents to guide them through the needed knowledge, clinical skills, competencies, evidence based medicine, communication skills and ethics required for pediatricians to graduate from the residency program.

Development of the Pediatric curriculum was a collaborative effort involving many parties under the leadership of the Palestinian Medical Council, its pediatric scientific committee, local consultants who worked hand in hand with an international expert from the Royal College of Paediatrics and Child Health, with guidance from the PMOH. Intrahealth International provided the needed technical assistance through the Palestinian Health Capacity Project and its partner Juzoor for Health and Social Development, with USAID funding and support. Other key stakeholders and pediatric experts in the medical community were also involved in the development of this curriculum.

It is my hope that the curriculum will be implemented by all pediatric residency teaching programs in Palestine in 2017 and onwards to improve the quality of education and health services offered to our precious Palestinian children. The future of our country rests in the hands of our children and we have the responsibility for improving and protecting the physical and mental health of our future generations.

 Dr. Jawad Awwad  
Minister of Health  
State of Palestine

## **Preface**

In 2014, the Palestine Medical Council (PMC), the Palestinian Ministry of Health (PMoH) and key stakeholders in the medical community, identified the review of national medical residency programs as a priority issue. In response, under the Palestinian Health Capacity Project (PCHP) funded by USAID, Juzoor for Health and Social Development and the Palestine Medical Council coordinated to review and revise the first national curriculum in General Surgery. After the success of the General Surgery revision, the Pediatric Medicine residency training curriculum was selected for review and updating.

The revision process was done with the significant input and involvement of the Palestine Medical Council headed by his Excellency the Minister of Health, and has been enthusiastically supported by the Secretary General, and the Pediatric Scientific Committee as well as the Palestinian Ministry of Health (PMoH) and other key stakeholders in the pediatric medicine community. Review and elaboration of the residency training curriculum was led by Palestinian consultants supported by an international colleague from the Royal College of Paediatrics and Child Health, using international standards and competency frameworks and the latest evidence-based knowledge and practices. The Scientific Committee and key stakeholders in the pediatric community played a major role in informing the content of the curriculum, providing feedback and suggestions, and ultimately endorsing the document.

The contents of this curriculum and further instructions related to the pediatric medicine residency program may be clarified or expanded upon by the Palestine Medical Council, in accordance with their mandate, through issuance of specific written communication and periodic notices.

## Background

The Palestine Medical Council was formed in 1996 and its status as an independent scientific medical body was established by the Palestinian Legislative Council in Law Number (1) in the year 2006. The PMC offered the first Palestinian Board exam in November 2001 for six medical specialties (among them pediatric medicine) and has offered exams in several specialties on a regular basis since then. The Council has the authority to arrange Board examinations to certify physicians in all specialties and sub-specialties, even those not offered in local residency programs. Law Number (1) established the authority of the PMC to (among other powers) set criteria for specialty medical training and be the sole body to certify physicians as specialists (this applied from 2006 onwards and did not change the status of specialists recognized prior to then by either the PMC or the Jordanian Medical Council (JMC). Certification by the PMC is a basic requirement of specialist physician licensing.

The Palestinian national residency program began in 2008 under the auspices of the Palestine Medical Council (PMC). Prior to the establishment of the national program, three Palestinian hospitals were accredited by the Jordanian Medical Council (JMC) as training centers. Al Makassed Hospital in Jerusalem was the only center with a fully accredited residency in Pediatric Medicine for all training years, having held accreditation from the (JMC) since 1988. The system of recognition by the JMC for training undertaken at Al Makassed or in select West Bank hospitals continued until 2008.

In establishing the national residency programs, the PMC adopted the Arab Board of Health Specializations' accreditation criteria, including for pediatric medicine. The Arab Board outlines the overall aims of pediatric medicine residency training and specifies objectives per the 4 year training program

A more detailed curriculum tailored to the Palestinian health context that standardizes knowledge and competencies for each residency year was needed to improve the quality and outcome of the pediatric medicine residency program in Palestine. Therefore this curriculum provides residents, clinical preceptors and the Palestine Medical Council with detailed technical content to assist in the implementation of the Palestinian Pediatric Medicine Residency Training program while responding to both the Palestinian and Arab Board requirements.

## Acknowledgements

This curriculum could not have been developed without valuable contributions from several organizations, health professionals and experts who gave of their precious time and expertise. The following organizations and individuals are hereby acknowledged for significant contribution to the preparation, writing and review of this curriculum:

### Individuals/ Organizations

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- Numerous Palestinian pediatricians from the PMoH, private and NGO sectors who actively participated in discussion sessions and provided recommendations on the curriculum revision
- Pediatric residents who shared their experiences in the local residency programs and provided valuable perspectives that informed the revision process

**Dr. Salwa Bitar**



**Palestinian Health Capacity Project –Chief of Party**

## **Introduction to this Curriculum**

Pediatricians are doctors who have a particular compassion and respect for children, young people and their families and enjoy working with them. They provide physical, mental and emotional care for infants, children and teenagers and have a detailed knowledge and understanding of diseases in children. They develop expertise in practical procedures specifically related to the good clinical care of small babies and children.

Pediatricians work in multi-disciplinary teams, have strong communication and interpersonal skills, share expertise effectively and assume the responsibilities of teaching, leadership and management roles where appropriate. Pediatricians ensure that they are up-to-date in their practice and promote evidence-based medicine where possible. They are committed to the highest standards of care and of ethical and professional behavior within their specialty and within the medical profession as a whole.

This document outlines the knowledge, skills, attitudes and behaviors that residents are expected to have acquired by the end of their specialty training in the Palestinian National Residency Program in pediatric medicine in order to be excellent pediatricians. This curriculum provides a detailed guide for the content of pediatric medicine residency training across all years of the program. The curriculum is for residents, instructors, training facilities, training program directors, the Palestine Medical Council, and others involved in pediatric education.

Residents should carefully review this curriculum and ensure that they are meeting the required competencies, gaining the necessary knowledge and acquiring the appropriate skills outlined in this document. As adult learners, residents are expected to take responsibility for their own progress and actively seek out opportunities to learn and benefit from the knowledge and experience of peers, instructors, other health care professionals, and patients and their families. It is also expected that residents will engage in on-going self-reflection and self-evaluation and direct their own learning to continually challenge themselves to excel as pediatricians. Residents should encourage constructive feedback from their instructors, peers, other health care professionals, and patients and their families, as an opportunity to grow professionally and improve their practice.

Instructors in the pediatric medicine residency program should be thoroughly familiar with the knowledge and procedures on which the curriculum is based, skilled in the practices described and have a positive attitude towards residents and their own work as educators. As mentors and teachers of the next generation of Palestinian pediatricians, instructors should model the same high standards in professional practice, attitudes and behavior expected of their residents. Instructors have a responsibility to provide constructive feedback to residents that is timely, specific and assists residents to improve their performance. It is highly recommended that instructors attend an “Educating the Educators” or other relevant course to hone their teaching skills.

Training facilities and program directors will find this curriculum useful to develop materials and set the teaching schedule for each year of the pediatric medicine residency program.

This curriculum is dependent on several resources and textbooks listed later that are essential to provide in-depth clinical knowledge and skills to residents in their education program.



## ***Organization of the Curriculum***

The curriculum is organized into the following sections:

Section 1: Overview of the curriculum – this section provides knowledge and competencies required per each year of the residency program

Section 2: Technical content of the curriculum – this section provides the details of the general competencies, the clinical knowledge and skill competencies and the procedural competencies by segment of the residency period (years 1&2 and years 3&4)

Section 3: Regulations and requirements of the residency program – this section includes Palestinian Medical Council regulations, admission requirements, departmental rotations, on-call commitments and vacation

Section 4: Teaching and Learning Methods – this section provides an overview of the teaching and learning methods to support delivery of the curriculum

Section 5: Assessment Methods and Evaluation Tools – this section provides an overview of the assessment methods to assess residents' performance.

Section 6: Assessing the implementation of the curriculum – this section outlines how the implementation of this curriculum will be assessed.

Section 7: References – this section provides a list of the references upon which this curriculum is based as well as other useful resources

## **Section 1: Overview of the Curriculum**

### ***Years 1 and 2***

The early years of pediatric training focus on the acquisition of history taking from patients and their families and examination of children skills. There is also a strong emphasis on other non-clinical skills including interpersonal and communication skills and professionalism and ethics.

**Year 1** 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
  - Presenting efficiently in the morning meeting
- Learning common pediatric ambulatory problems and participating in ambulatory pediatric patient 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 Basic Life Support (BLS) and Neonatal Resuscitation Program (NRP) courses

**Year 2** 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:

- Time management and decision making
- Acquiring professional behavior and working as part of a team
- Supervising the work of first year residents
- Teaching interns and undergraduate students
- Learning to recognize an acutely sick child and to manage various problems in Pediatric Intensive Care Unit (PICU) setting
- Complete Pediatric Advanced Life Support (PALS) Course
- Conducting Ambulatory Clinics under supervision

### ***Years 3 and 4***

The second half of training aims to achieve a pediatrician who is able to manage common and straight forward conditions safely and independently and who demonstrates excellent non-technical skills that are essential to patient care.

**Year 3** focuses on taking higher responsibility in patient care and decision making and adopting a greater supervisory and teaching role.

Residents will add on the following responsibilities to the above:

- Subspecialty training exposure
- 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, year 1 and 2 residents
- Designing a research project or audit with the assistance of a Senior Doctor

Year 4 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 out -patient (OP) clinic
- Assuming a more independent role in patient intensive care
- Attending refresher BLS, PALS and NRP courses
- Presenting a research project by the end of the year
- Formally teaching and supervising students, interns and junior residents

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

## Section 2: Technical Content of the Curriculum

### A. General competencies

This section covers competencies in good clinical care, maintaining good medical practice, interpersonal and communication skills, team working and interprofessional collaboration, leadership, teaching and learning and professionalism, ethics and research.

| Competency                       | Years 1 and 2  | Years 3 and 4  |
|----------------------------------|--|--|
| <p><b>Good Clinical Care</b></p> | <p>Acquire effective skills in pediatric assessment which includes assessment of signs and symptoms accurately and recognize presentations of common disorders in pediatrics</p> <p>Develop skills in appropriate differential diagnosis in pediatrics</p> <p>Conduct effective initial management of common acute and chronic conditions in pediatrics appropriately and begin to make common decisions in the care of patients</p> <p>Understand the need for careful medical record keeping and accurate report writing</p> <p>Develop effective written communication skills</p> <p>Develop good responses to investigations in pediatrics and be able to demonstrate safe practice in the timely and appropriate requests for investigations</p> <p>Acquire skills and knowledge in safe prescribing of common medications in all age groups including newborns</p> | <p>Have responsibility for conducting effective pediatric assessments and interpreting findings appropriately</p> <p>Be able to make decisions on the most likely diagnosis with regular use of analytic and informed clinical reasoning</p> <p>Be responsible for effective management of common acute and chronic conditions in pediatrics and be able to take responsibilities for longer term management plans</p> <p>Be thorough in making accurate reports and records</p> <p>Be able to initiate appropriate investigations and management plans and know the role of complex investigations and potential complications</p> <p>Be able to prescribe safely and be aware of drug interactions</p> |

|   | Years 1 and 2   | Years 3 and 4   |
|---|---|---|
| <b>Competency</b><br><b>Maintaining good medical practice</b> | <p>Knowledge of the basic science for pediatrics</p> <p>Knowledge of common and serious pediatric conditions and their management</p> <p>An understanding of an evidence-based approach to pediatric practice</p> <p>An understanding of clinical audit in pediatric practice</p>   | <p>Extended knowledge of the basic science for pediatrics</p> <p>Extended knowledge of common and serious pediatric conditions and their management</p> <p>Development and refinement of evidence-based clinical pediatrics</p> <p>Participation in clinical audit in pediatric practice</p>  |
| <b>Interpersonal and communication skills</b>                 | <p>Be able to take a history accurately and sensitively</p> <p>Have begun to develop skills and strategies to manage consultations effectively with babies, young children, adolescents and their families</p> <p>Begun to develop effective written communications with patients and their families, with colleagues and with other professional organisations</p> <p>Have understood the need to respond to babies, disabled children or young people who may not be able to express themselves verbally and who might be in pain or distress</p> <p>Understand the need to develop strategies for careful and appropriate use of language in difficult and challenging circumstances</p> <p>Be able to discuss the indications, benefits and adverse events of a procedure to patients, relatives and care – takers that will allow informed consent for procedure which the doctor is competent themselves to perform</p> | <p>Be able to take responsibility for an effective consultation</p> <p>Have developed effective consultation skills and strategies with babies, young children, adolescents and their families</p> <p>Have developed skills for effective written communications with patients and their families, with colleagues and with other professional organisations</p> <p>Demonstrate an ability to respond to babies, disabled children or young people who may not be able to express themselves verbally, including those who maybe in pain or distress</p> <p>Begin to develop strategies for careful and appropriate use of language in difficult and challenging circumstances</p> <p>Have developed active listening skills with children and young people and understood the need to respect their views in accordance with their age and maturity and to respond appropriately, where, for example, a child is felt to be vulnerable</p> |

| Competency   | Years 1 and 2   | Years 3 and 4   |
|--|---|---|
|  | <p>Have begun to develop active listening skills with children and young people and understood the need to respect their views</p> <p>Show patience and sensitivity in communications with children and their families</p> <p>Ensure that written communications summarize accurately discussions with young people and parents or care givers, and, to avoid confusion and anxiety, do not include info that was not part of the original discussion.</p> <p>Be able to write medical reports</p> <p>Have strong communication and interpersonal skills to enable them to work effectively with patients and their families, and colleagues in multi-professional and multi-discipline teams</p> <p>Know about agencies that can provide support to children and their families in coping with illness.</p> <p>Demonstrate the ability to work effectively in multi-disciplinary teams and with colleagues from a wide range of groups</p> <p>Understand the importance of effective team work with colleagues in multi-disciplinary teams to ensure consistency and continuity and a holistic approach to the treatment and care of children and young people</p> |   |
| <b>Team work and interprofessional collaboration</b> |   | <p>Be able to write reports on medical or developmental conditions for parents and non-clinical staff in education and elsewhere that are easily understood by the lay person and that explains the implications of the condition and how it may impact on her or his care givers in non-clinical settings</p> <p>Contribute to the training of medical students and post graduate trainees and other professionals such as nurses, physiotherapists, dieticians and others outside their speciality such as teachers and social workers</p> <p>Have developed skills to establish a child's or young person's and family's understanding of a situation, clarifying this as appropriate and to build on this effectively in discussion about the condition and its management</p> <p>Know how to access national resources and the internet as well as local sources to provide information to children and families about support groups</p> <p>Experience of working with multi-agency teams for example with social workers and teachers</p> <p>Recognize their own working preference and how these may impact on team working</p> |
| <b>Leadership promotion</b>                          | <p>Have effective time management skills in their professional roles</p> <p>Be able to prioritize tasks in personal and professional</p>  | <p>Have developed effective organizational skills for themselves and for others in prioritization and delegation</p> <p>Be able to think clearly and to prioritize in clinical decision</p>   |

| Competency                          | Years 1 and 2  | Years 3 and 4   |
|-------------------------------------|--|---|
|                                     | <p>contexts for example in medical emergencies</p> <p>Show an understanding of the importance of ensuring the healthy balance between professional and domestic priorities</p> <p>Demonstrate a responsibility for their own health in so far as it might affect the welfare of safety of patients</p>   | <p>making and practice</p> <p>Have developed confidence to make decisions within a team</p> <p>Be able to take on a leadership role in multi-disciplinary teams when appropriate, for example at a discharge meeting and know when it may be inappropriate to do so</p> <p>Have developed some leadership skills for example in communicating the urgency of action in an emergency while enabling teams to remain calm</p> <p>Have developed effective problem solving strategies in clinical and management contexts, for example where there is a shortage of beds or medical staff or other resource</p> <p>Be able to recognize the effective qualities of management of meetings, such as having clear action points and achievable and recognizable outcomes</p> |
| <p><b>Teaching and learning</b></p> | <p>Began to develop a reflective approach to their practice and a commitment to learning and improving their practice through reflection</p> <p>Begin to develop a sound understanding and a commitment to the principles and practice of effective teaching and learning in clinical contexts</p> <p>Understand the importance of a positive and constructive approach to mentoring and supervision</p> <p>Show a commitment to their continuing professional development and respond positively to requests for enquiries or critical incident reports and to outcomes of reviews, assessments and appraisals of their performance</p> | <p>Have developed a reflective approach to their practice with an awareness of their developing expertise and an ability to learn from previous good practice and clinical errors</p> <p>Show a commitment to continuing professional development which would involve not only seeking appropriate training opportunities but also responding to complaints and enquiries as useful learning tools</p> <p>Have developed a keen self-awareness so that they know when they are ready to take on new challenges such as breaking bad news to a family and when they continue to need support and guidance ( know their limitations)</p> <p>Have developed some effective teaching and learning skills in a range of clinical contexts</p>                                |

| Competency                                  | Years 1 and 2  | Years 3 and 4   |
|---|--|---|
| <b>Professionalism, Ethics and Research</b> | <p>Understand the importance of cultural diversity and the difficulties where religious and cultural beliefs that parents might hold about the treatment of their children are in conflict with good medical practice (and know where to find legal and ethical guidelines to support their work)</p> <p>Have an open minded approach to equality and diversity</p> <p>Know the law with regard to consent and confidentiality, in children, young people and adolescents and follow the relevant legal principles in practice</p> <p>Begin to understand basic concepts in research design and methodology including the difference types of research studies</p> <p>Understand the difference between research and audit</p> <p>Understand the steps involved in planning a research project</p> <p>Understand when to use simple statistical tests and their interpretation</p> | <p>Participate in departmental teaching programs</p> <p>Be able to supervise and teach the relevance of appropriate investigations</p> <p>Understand the importance of a positive and constructive approach to mentoring when giving guidance, support, feedback to trainees under their supervision</p> <p>Understanding of research methods and methodology</p> <p>Be aware of the different cultural and religious beliefs held by the local population which impact on attitudes to health and sickness in children and begin to develop strategies to manage relationships where these beliefs might cause conflict</p> <p>Understand the importance of an open minded approach to equality and diversity and follow this in their practice</p> <p>Understand the process of the Ethical Committee approval for research studies</p> <p>Show that they have understood the basic approach to research study design</p> <p>Be able to plan a research project effectively under supervision</p> <p>Have developed critical appraisal skills and can show how to apply these to their reading of the literature, including systematic reviews, reviews of their own teaching and the teaching of others</p> <p>Understand the limitations of their competence at their stage of training and be willing to seek help in managing</p> |



| Competency | Years 1 and 2   | Years 3 and 4   |
|------------|---|---|
|            | <p>Begin to develop critical appraisal skills and to apply to their reading of the literature, including systematic reviews of their own teaching and the teaching of others</p> <p>Understand the limitations of their competence, in their clinical practice and in their relationships with patients and know where and when to ask for help, support and supervision</p> <p>Understand the need for honesty and know the procedures to follow where there is concern about the professional conduct of a colleague who might be putting the health of a patient at risk</p> <p>Demonstrate probity in personal and professional life</p> <p>Demonstrate a commitment to the highest standards of care and ethical and professional behavior within their specialty and with the medical profession as a whole</p> | <p>sensitive and complex situations</p> <p>Act with honesty and know the procedures to follow where there is concern about the professional conduct of a colleague who might be putting the health of a patient at risk</p> <p>Recognize and support colleagues who may be under pressure</p> |

## ***B. Subspecialty clinical knowledge, skills, attitudes and behaviors competencies***

This section covers competencies relating to clinical knowledge, skills, attitudes and behaviors in pediatric subspecialties including cardiology, dermatology, endocrinology, gastroenterology and hepatology, genetics and dysmorphology, hematology and oncology, infection, immunology and allergy, metabolic diseases, musculo-skeletal medicine, neonatology, nephro-urology, neurology and neurodisability, ophthalmology, palliative care, respiratory and ENT and safeguarding children.

| Skills  | Years 1 and 2  | Years 3 and 4  |
|---|--|--|
| <p><b>Cardiology</b><br/>General Competencies</p> | <p>Have the knowledge and skills to assess and initiate management of children presenting with cardiological disorders</p> <p>Be able to formulate a differential diagnosis</p> <p>Be able to respond appropriately to cardiac arrest</p> <p>Be able to select and interpret appropriate cardiological investigations</p> <p>Understand the life threatening nature of some of the cardiological conditions</p> <p>Know the possible cardiac complications of other system disorders</p> | <p>Be able to provide advanced life support and lead the team at a cardiac arrest.</p> <p>Be able to identify common ECG abnormalities and problems encountered in children operated for common heart diseases</p> |
| <p>Cyanosis</p>                                   | <p>Know the normal fetal circulation and transitional changes after birth</p> <p>Know the anatomy of the common causes of cyanotic heart disease</p> <p>Be able to differentiate between cardiac and non-cardiac causes of cyanosis</p>  | <p>Be able to initiate emergency management for cyanotic patient</p> <p>Be able to describe clinical signs and investigations accurately and effectively with a cardiologist</p>                                   |

| Skills                 | Years 1 and 2   | Years 3 and 4  |
|------------------------|---|--|
| Heart Failure          | Understand the causes of heart failure  | Be able to initiate appropriate investigations and treatment   |
| Arrhythmias            | Be able to initiate appropriate investigations<br>Know the causes of arrhythmias  | Be able to initiate emergency treatment in arrhythmias   |
| Infective Endocarditis | Be able to recognize common dysrhythmias on ECG<br>Know when prophylaxis against endocarditis is indicated  | Be able to recognize the possibility of endocarditis and initiate treatment  |
| Heart murmur           | Know the causes of common heart murmurs<br>Be able to interpret correctly heart sounds and added sounds   | Be able to advise families appropriately about the effects of heart disease at school  |
| Hypertension           | Know and understand the causes of hypertension<br>Recognize the importance of examining femoral pulses in all children  | Know the principles of treatment of hypertension   |
| Syncope                | Know the cardiac causes of syncope<br>Be able to initiate appropriate investigations including appropriate ECG analysis   | Be able to differentiate syncope from seizures   |
| <b>Dermatology</b>     | Have the knowledge and skills to be able to recognize, investigate and manage common skin complaints<br>Know about the cutaneous and mucosal manifestations of systemic disease<br>Understand the principles of therapy for skin complaints | Understand the impact of severe dermatological problems on children<br>Be able to manage mild eczema and seborrheic dermatitis |
| Skin Infections        | Know the causal bacteria, features, complications and management of cellulitis including periorbital cellulitis   | Be able to treat scabies, pediculosis, and common viral and fungal skin infections   |

| Skills                      | Years 1 and 2  | Years 3 and 4  |
|-----------------------------|--|--|
|                             | <p>Recognize scabies, pediculosis, and common viral and fungal skin infections</p> <p>Be aware of the different patterns of drug reaction and of the common precipitants</p>   | <p>Know when to consult dermatology and ophthalmology specialist</p>   |
| Erythematous rash and fever | <p>Know the causes of fever and an erythematous rash</p> <p>Be able to recognize Kawasaki syndrome and to institute appropriate treatment</p>  | <p>Recognize and initiate management of rare but serious causes, e.g. toxic shock syndrome</p>   |
| <b>Endocrinology</b>        | <p>Have the knowledge and skills to be able to assess and initiate management of patients presenting with diabetes, growth or endocrine presentations in inpatient or outpatient settings</p> <p>Be able to measure children accurately and to assess their growth using appropriate growth charts</p> <p>Be able to assess accurately pubertal stages</p> | <p>Have the knowledge and skills to be able to assess and initiate management of patients presenting with diabetes, growth or endocrine presentations in inpatient and outpatient settings</p> |
| Diabetes mellitus           | <p>Know the pathophysiology of diabetes</p> <p>Know the principles of diabetes management</p> <p>Know about the long term complications of diabetes and about ways to reduce the risks of these occurring</p> <p>Be able to give basic advice about diet and exercise</p>  | <p>Be able to explain this condition to parents and initiate treatment</p>   |

| Skills                    | Years 1 and 2   | Years 3 and 4   |
|---------------------------|---|---|
| Diabetic ketoacidosis     | <p>Understand the pathophysiology of diabetic ketoacidosis</p> <p>Be aware of potential complications including cerebral edema</p> <p>Be able to recognize the clinical features of this condition</p> <p>Be able to manage ongoing treatment safely with guidance</p>          | <p>Recognize potential complications including cerebral edema</p> <p>Be able to manage ongoing treatment safely within guidelines</p>   |
| Hypoglycemia              | <p>Know the causes, complications and treatment in the neonatal period and beyond</p> <p>Know that blood glucose is an urgent investigation in patients with impaired conscious level</p> <p>Be able to take relevant investigations required for the confirmation of cause</p> | <p>Know when to consider rare causes of hypoglycemia and what investigations to perform during the hypoglycemic episode</p> <p>Be able to treat hypoglycemia safely and effectively</p> |
| Ambiguous genitalia       | <p>Be aware of the causes of this presentation.</p> <p>Understand the features of congenital adrenal hyperplasia and its early management</p>   | <p>Be able to give appropriate information to parents</p>   |
| Abnormal rates of growth  | <p>Know the causes of short stature.</p> <p>Know when short stature needs to be investigated Know about the causes of tall stature</p> <p>Be able to explain to parents and patients the non-serious causes of short stature e.g. genetic short stature and constitutional</p>  | <p>Be aware of treatments that are suitable for pathological short stature.</p> <p>Recognize the need to rule out Turner's syndrome as a cause of short stature in girls</p>            |
| Delayed and early puberty | <p>Know the causes of early and late puberty</p> <p>Recognize when the cause may be pathological rather than physiological</p>  | <p>Know the causes and possible investigation of early and late puberty</p>   |

| <b>Skills</b>                          | <b>Years 1 and 2</b>   | <b>Years 3 and 4</b>  |
|--|--|---|
| Goiter and thyroid disorders           | <p>Know the causes of congenital and acquired hypothyroidism</p> <p>Understand the need for precise treatment and monitoring during infancy and early childhood</p>  | Be able to interpret thyroid function tests on and off treatment  |
| Obesity                                | <p>Understand the causes of obesity and the long term complications</p> <p>Be able to use body mass index charts to diagnose obesity</p>   | <p>Know about the presentation of type 2 diabetes during childhood</p> <p>Be able to explain the long term complications to parents</p>     |
| <b>Gastroenterology and Hepatology</b> | <p>Have the knowledge and skills to be able to assess and initiate management of patients presenting with gastroenterological problems in acute and outpatient settings</p> <p>Recognize when a surgical opinion is required</p> | Understand the role of interventional procedures e.g. endoscopy or colonoscopy in the investigation of gastroenterological disorders        |
| Acute abdominal pain                   | <p>Know the causes of acute abdominal pain.</p> <p>Recognize conditions which require urgent intervention e.g. intussusception</p>   | <p>Recognize the need to consider acute appendicitis in very young children.</p> <p>Recognize signs of pain in an infant or small child</p> |
| Acute diarrhoea and/or vomiting        | Know the causes of the symptoms of acute diarrhoea and/or vomiting   | Understand the scientific principles for oral and intravenous fluid therapy   |
| Jaundice                               | Know the causes of neonatal and childhood jaundice   | Investigate appropriately and know when to refer to specialist services   |

| Skills                                    | Years 1 and 2  | Years 3 and 4  |
|---|--|--|
| Upper and lower gastrointestinal bleeding | <p>Know the causes of upper and lower gastrointestinal bleeding</p> <p>Understand the potentially life threatening nature of this condition</p>  | <p>Recognize features in the presentation which suggest serious pathology</p> <p>Know how to institute appropriate emergency treatment</p> |
| Abdominal distension                      | <p>Know the causes of abdominal distension</p>   | <p>Initiate investigation and seek surgical opinion when required</p>  |
| Acute liver failure                       | <p>Know the causes of acute liver failure</p> <p>Know the complications of acute liver failure</p>   | <p>Be able to initiate appropriate resuscitation and treat patients with acute liver failure</p>   |
| Congenital abnormalities                  | <p>Know the presenting features of congenital abnormalities including trachea-esophageal fistula, malrotation, bowel atresia, Hirschsprungs disease</p> <p>Know how to institute appropriate emergency treatment.</p> <p>Recognize the need to consult with surgeons</p> | <p>Institute appropriate emergency treatment</p> <p>Recognize the need to contact surgeons and when this is urgent</p>                     |
| Gastro-esophageal reflux and esophagitis  | <p>Know the range of presentations of gastro-esophageal reflux and esophagitis</p>   | <p>Manage mild and moderate gastro-esophageal reflux</p>   |
| Chronic or recurrent abdominal pain       | <p>Know the possible biological, psychological and social contributing factors in chronic or recurrent abdominal pain</p> <p>Recognize red flag signs that suggest the importance of different etiologies</p>  | <p>Know which features suggest that reassurance rather than investigation is needed</p> <p>Be able to manage common cases</p>              |
| Chronic diarrhea and/or vomiting          | <p>Know the causes of chronic diarrhea and/or vomiting</p>   | <p>Be able to initiate investigations and manage common cases</p>  |

| Skills                               | Years 1 and 2  | Years 3 and 4   |
|--------------------------------------|--|---|
| Constipation with or without soiling | <p>Know about predisposing conditions e.g. hypothyroidism, neurodisability, psychosocial problems</p> <p>Manage simple constipation with and without soiling</p>   | Understand the relevance of predisposing conditions e.g. hypothyroidism, neurodisability, psychosocial problems   |
| Malabsorption                        | <p>Know the causes of malabsorption including celiac disease and cystic fibrosis</p> <p>Understand the principles of treatment of the different types of malabsorption</p>   | Be able to explain and initiate investigations, nutritional assessment and dietary principles   |
| Malnutrition                         | <p>Know the causes of malnutrition including organic and non-organic causes. Be familiar with the consequences of malnutrition</p> <p>Be able to assess nutritional status</p>   | Be able to initiate investigations to establish the diagnosis and detect nutritional deficiencies and initiate management with dietetic support   |
| <b>Genetics and Dysmorphology</b>    | <p>Understand the scientific basis of chromosomal disorders and inheritance</p> <p>Be able to construct a family tree and interpret patterns of inheritance</p> <p>Understand the basis of molecular genetics</p> <p>Know about the features of common chromosome disorders</p> <p>Know the basis of prenatal screening and diagnosis</p> <p>Understand the risks of and cultural issues posed by consanguinity</p> <p>Be able to recognize features suggesting dysmorphic or genetic syndromes and to identify associated anomalies</p> | <p>Recognize the features of common chromosome disorders.</p> <p>Be able to recognize and investigate common malformation or deformation syndromes and to identify associated anomalies</p> <p>Be able to plan transitional care and referral of the young person to clinical genetics service at an appropriate time</p> |



| Skills                               | Years 1 and 2   | Years 3 and 4  |
|--------------------------------------|---|--|
| <b>Hematology and Oncology</b>       | <p>Have the knowledge and skills to be able to assess patients presenting with hematological or oncological presentations in inpatient and outpatient settings</p> <p>Know the principles of cancer treatment</p> <p>Know about blood transfusion policies</p>              | <p>Know the short and long term side effects of chemotherapy and radiotherapy and be able to explain the common ones</p>     |
| Anemia                               | <p>Know and understand the causes of anemia</p> <p>Understand the investigations which may clarify the diagnosis</p> <p>Understand the hereditary basis and clinical features of sickle cell anemia and the thalassemia</p> <p>Be able to manage iron deficiency anemia</p> | <p>Be able to investigate anemia and recognize serious underlying pathology.</p> <p>Be able to manage sickle cell crises</p> |
| Neutropenia                          | <p>Understand the significance of fever in a neutropenic patient</p> <p>Be able to manage febrile neutropenia with guidance</p>   | <p>Be able to manage febrile neutropenia</p>   |
| Purpura and bruising                 | <p>Know the causes of purpura and bruising.</p> <p>Recognize features in the presentation which suggest serious pathology or child abuse</p>  | <p>Be able to manage acute bleeding in bleeding disorders</p>  |
| Other hemorrhage due to coagulopathy | <p>Know the causes and presentations of hemorrhagic disease of the newborn</p> <p>Understand the hereditary basis of hemophilia and other coagulation disorders</p>   | <p>Be able to recognize and treat hemoarthrosis in a patient with hemophilia</p>   |

| Skills                                   | Years 1 and 2  | Years 3 and 4  |
|--|--|--|
| Leukemia                                 | <p>Be aware of the different types of leukemia and of their prognoses</p> <p>Recognize and understand the clinical manifestations of leukemia</p> <p>Know the clinical features of Hodgkin's disease and non-Hodgkin's lymphoma</p>  | <p>Be able to recognize and initiate investigations to diagnose leukemia</p> <p>Know the features which suggest lymphadenopathy may be malignant and how it may be investigated</p>  |
| <b>Infection, Immunology and Allergy</b> | <p>Know and understand host defense mechanisms and their pattern of development</p> <p>Know the classification of infectious agents</p> <p>Know the epidemiology, pathology and natural history of common infections of the fetus, newborn, and children in Palestine</p> <p>Be able to follow agreed local and national guidelines on notification of infectious diseases</p> <p>Understand the rationale for prescribing common antimicrobials</p> <p>Understand nosocomial infections and the basic principles of infection control.</p> <p>Understand the classification of immunodeficiencies</p> | <p>Recognize indications for and be able to prescribe appropriate first line common anti-microbials</p> <p>Be able to prescribe antimicrobial prophylaxis appropriately</p> <p>Apply principles of infection control.</p> <p>Take responsibility for notifying communicable diseases</p> |
| Septic shock                             | <p>Understand the pathophysiology of septic shock and its complications</p> <p>Be aware of the differential diagnosis of septic shock</p>  | <p>Be able to initiate and lead immediate management of early and advanced features of septic shock</p>  |

| Skills                               | Years 1 and 2   | Years 3 and 4  |
|--------------------------------------|---|--|
| Fever of unknown origin              | <p>Know the possible causes of fever of unknown origin</p> <p>Recognize features in the presentation which suggest serious or unusual pathology</p>   | <p>Know how to initiate investigations to establish cause</p>  |
| Anaphylaxis                          | <p>Know the management of anaphylaxis guidelines</p>  | <p>Be able to lead the team to provide advanced life support.</p> <p>Be able to advise on the future risk of anaphylaxis and facilitate an appropriate anaphylaxis management plan</p> |
| Recurrent infections                 | <p>Be aware of conditions which predispose to infection</p>   | <p>Recognize and investigate appropriately features in the presentation which suggest underlying pathology</p>   |
| Food intolerance and other allergies | <p>Know the common offending foods</p> <p>Be aware of the investigations that are available and of their limitations</p> <p>Know the features of cows' milk protein intolerance and its management</p> <p>Understand passive and active immunization.</p> | <p>Understand the mechanisms of IgE and non IgE food allergy</p> <p>Recognize the potential serious nature of food allergy</p> <p>Advise on the appropriate use of adrenaline</p>      |
| Immunization                         | <p>Understand the principles and the rationale behind the national immunization policy for children in Palestine</p> <p>Know the indications, contraindications and complications of routine childhood immunizations</p>                                  |  |

| Skills                           | Years 1 and 2   | Years 3 and 4   |
|----------------------------------|---|---|
| <p><b>Metabolic diseases</b></p> | <p>Recognize the clinical and biochemical features of electrolyte and acid base disturbances</p> <p>Know the common clinical presentations of metabolic disease including encephalopathy, neurodevelopmental regression, muscle weakness, visceromegaly and failure to thrive</p> <p>Know when it is appropriate to perform metabolic investigations in neonates and children</p> <p>Know the appropriate screening investigations that should be performed when a metabolic disorder is suspected</p> <p>Know further investigations that should be performed in order to establish a diagnosis of a metabolic disorder</p> <p>Be able to interpret commonly used investigations and understand how these differentiate between metabolic disorders including those that result in cot death</p> <p>Know about the common biochemical findings in an acutely ill newborn or child presenting with metabolic disease including hypoglycemia, hyperammonemia or metabolic acidosis</p> <p>Understand when it is appropriate to investigate, and which investigations to perform, in a neonate or child with visceromegaly</p> <p>Know the causes of metabolic bone disease and investigations to differentiate between the causes</p> <p>Know the routine screening tests for metabolic disease and be able to explain them to parents</p> | <p>Be aware of those metabolic disorders which are vitamin responsive or responsive to pharmacological treatment</p> <p>Know about the metabolic disorders which may respond to enzyme therapy or bone marrow transplantation</p> <p>Recognize and be able to manage the clinical and biochemical features of electrolyte and acid base disturbances</p> <p>Know the common clinical presentations and principles of management of metabolic disease including encephalopathy, neurodevelopmental regression, muscle weakness, visceromegaly and faltering growth</p> <p>Be able to initiate metabolic investigations in neonates and children and in urgent situations</p> <p>Know what samples must be taken in metabolic investigations at the time of presentation and the importance of liaison with laboratories to ensure use of the appropriate container, handling and storage</p> |

| Skills                           | Years 1 and 2  | Years 3 and 4   |
|----------------------------------|--|---|
|                                  | <p>Know the routine screening tests for metabolic disease and be able to explain them to parents</p> <p>Know the inheritance patterns of common genetically determined metabolic disorders</p>   |   |
| <b>Musculo-skeletal medicine</b> | <p>Know the differential diagnosis of musculoskeletal presentations including inflammatory, non-inflammatory and idiopathic causes , physical abuse, emotional abuse and neglect</p> <p>Take an appropriate history, musculoskeletal examination and assessment</p> <p>Be able to perform a musculoskeletal assessment including a screening examination and an approach to more detailed examination</p> <p>Recognize when to request the opinion of pediatric rheumatologists or orthopedic surgeons</p> <p>Know the differential diagnosis of a limp at different ages and clinical presentations</p> <p>Know the differential diagnosis of limb pains</p> <p>Be aware of the clinical features of benign hypermobility and non-benign hypermobility (e.g. Marfans syndrome)</p> <p>Be able to assess joint laxity</p> <p>Be aware of the causes of back/neck pain and be aware of features that may suggest serious underlying pathology</p> | <p>Understand the indication for and complications of immunosuppressive treatment</p> <p>Be aware of congenital bone, inherited or metabolic conditions and their musculoskeletal presentations</p> <p>Interpret investigations that are helpful in establishing a differential diagnosis</p> <p>Know when to refer for a specialist opinion and when to involve pediatric rheumatologist</p> <p>Know normal patterns of leg alignment and foot posture (bow legs, knock knees, in-toeing and flat feet) at different ages</p> <p>Be able to assess clinically whether there is likely to be a serious underlying pathology and when specialist opinion is required</p> <p>Know the predisposing factors and presentation of rickets and radiological features of rickets</p> |

| Skills             | Years 1 and 2   | Years 3 and 4   |
|--------------------|---|---|
|                    | <p>Be able to recognize scoliosis</p> <p>Know the causes of scoliosis</p> <p>Know the common causes of Torticollis</p> <p>Know the causes of back/neck pain</p>   |   |
| <b>Neonatology</b> | <p>Be able to perform an accurate assessment of the baby at birth</p> <p>Be able to initiate appropriate resuscitation when required and have successfully completed a neonatal life support course</p> <p>Know and understand the pathophysiology of the effects of prematurity</p> <p>Understand the principles of mechanical ventilation and resuscitation</p> <p>Be able to perform a reliable assessment of fluid status and initiate appropriate fluid management</p> <p>Be able to perform basic practical procedures and tests and be able to understand the results</p> <p>Know when and how babies are transferred for specialist levels of intensive care</p> <p>Understand the principles of parenteral nutrition</p> <p>Understand the long-term sequelae of prematurity</p> | <p>Understand the principles of and initiate mechanical ventilation and resuscitation</p> <p>Understand the principles of parenteral nutrition and be able to prescribe safely</p> <p>Be able to describe the long-term sequelae of prematurity and recognize those at risk</p> <p>Be able to initiate and lead advanced resuscitation when required</p> <p>Have successfully completed a refresher neonatal life support course</p> <p>Be able to decide on appropriate referrals for transfer to other units, communicate effectively with all involved and maintain care as safely as possible until transfer team takes control</p> <p>Know how to interpret radiological investigations including the basic features of cranial ultrasound</p> |

| Skills                                   | Years 1 and 2  | Years 3 and 4   |
|--|--|---|
| Perinatal asphyxia                       | <p>Know the causes and possible outcomes.</p> <p>Understand the principles of resuscitation</p> <p>Know the criteria necessary before perinatal asphyxia can be diagnosed</p> <p>Be able to initiate resuscitation using bag and mask ventilation and cardiac compressions</p> <p>Be able to intubate term babies and have had supervised experience of intubating preterm babies</p>  | <p>Understand the physiology of resuscitation and how to respond</p> <p>Understand the long term implications of hypoxic-ischemic damage</p> <p>Be able to provide and lead basic and advanced resuscitation, including intubation of term and preterm babies</p> |
| Respiratory Distress (acute and chronic) | <p>Understand the common causes of respiratory distress</p> <p>Understand the principles and complications of ventilation</p> <p>Know the guidelines for surfactant therapy</p> <p>Be able to initiate respiratory support</p> <p>Be able to suspect and diagnose pneumothorax</p> <p>Obtain, interpret and act appropriately on blood gas results</p> <p>Be able to insert umbilical arterial and venous lines</p> <p>Be able to identify signs suggestive of patency of the duct and describe management options</p> | <p>Understand the principles and complications of differing ventilation techniques</p> <p>Be able to diagnose pneumothorax and know when chest drainage is indicated</p> <p>Know the steps that need to be taken to discharge a baby on long term oxygen</p>      |

| Skills  | Years 1 and 2   | Years 3 and 4   |
|---|---|---|
| Cyanosis not of respiratory origin  | <p>Understand the anatomy and implications of cyanotic congenital heart disease</p> <p>Understand the pathophysiology of persistent pulmonary hypertension and know about treatment</p> <p>Be able to suspect the diagnosis and initiate appropriate investigations</p> | <p>Be able to make a likely diagnosis and initiate appropriate investigations and treatment</p>   |
| Intra-uterine growth restriction and other nutrition problems               | <p>Know the causes of intra-uterine and postnatal growth failure</p> <p>Know about risk factors for necrotizing enterocolitis</p> <p>Be able to keep and interpret accurate growth records</p>  | <p>Understand the importance of nutrition in sick babies</p> <p>Know about the signs, symptoms and complications of necrotizing enterocolitis</p>                                     |
| Fluid and blood product therapy   | <p>Know the fluid requirements of preterm and sick babies</p> <p>Know the indications for therapy with blood products</p>   | <p>Be able to act to correct fluid balance abnormalities</p> <p>Be able to prescribe blood product transfusions</p>   |
| Neonatal seizures or abnormal neurological status including the floppy baby | <p>Know about periventricular hemorrhage and leukomalacia</p> <p>Be able to perform a neurological assessment</p> <p>Be able to recognize the basic features of cranial ultrasound scans</p> <p>Be able to recognize and initiate management of seizures</p>            | <p>Know the possible causes and effects of seizures</p> <p>Be able to perform a cranial ultra-sound</p> <p>Be able to make a likely diagnosis and initiate management of seizures</p> |
| Congenital abnormalities  | <p>Be able to recognize serious abnormalities</p> <p>Be able to initiate appropriate tests</p> <p>Be able to respond to parents' immediate questions</p>  | <p>Be able to break difficult news to parents</p>   |



| Skills         | Years 1 and 2   | Years 3 and 4   |
|----------------|---|---|
| Sepsis         | <p>Understand the important of timely treatment</p> <p>Practice effective infection control</p>   | <p>Anticipate early signs of sepsis and initiate appropriate anti-microbial therapy and supportive management</p>   |
| The dying baby | <p>Know about terminal care and bereavement counselling</p> <p>Be able to communicate sympathetically with parents</p> <p>Begin to develop strategies to deal with personal stress and know when to look for support</p>  | <p>Understand the ethical principles in withdrawing or withholding care from an infant</p> <p>Be able to communicate sympathetically with parents and other relatives</p> |
| Jaundice       | <p>Differentiate between the causes of conjugated and unconjugated hyperbilirubinemia</p> <p>Know how an exchange transfusion is performed</p> <p>Be able to prescribe phototherapy appropriately</p> <p>Recognize features which suggest serious pathology</p> | <p>Know how and when to undertake an exchange transfusion</p> <p>Be able to undertake a full exchange transfusion or refer in a timely manner if unable to do so</p>      |
| Screening      | <p>Know the range of screening tests used including the newborn examination</p> <p>Know about the Newborn Hearing Screening Programme</p>   | <p>Know about retinopathy and cataract screening</p> <p>Know the management of developmental dysplasia of the hip</p>   |

| Skills                           | Years 1 and 2   | Years 3 and 4  |
|----------------------------------|---|--|
| <b>Nephro-urology</b>            | <p>Have the knowledge and skills to be able to assess and initiate management of patients presenting with nephro-urology problems in acute and outpatient settings</p> <p>Be able to perform a reliable and accurate assessment of fluid status and initiate appropriate fluid management</p> <p>Have the knowledge and understanding of fluid and electrolyte imbalance, acid-base, and blood pressure in children with kidney problems.</p> | <p>Understand the role of different renal imaging techniques including ultrasound, static and dynamic isotope scans in the investigation of urinary tract disorders and recognize common abnormalities</p>   |
| Nephrotic syndrome (Proteinuria) | <p>Know features that suggest Nephrotic Syndrome</p> <p>Understand the complications of the nephrotic state</p> <p>Understand the principles of the pharmacological, dietary and fluid management</p> <p>Understand the investigations including the indications for renal biopsy</p> <p>Be able to advise parents on the complications of steroid therapy</p>  | <p>Assess features in the presentation, which suggest serious or significant pathology (steroid dependent and steroid resistant)</p> <p>Be able to advise parents on long-term management and complications of treatment</p>                       |
| Acute nephritis (Hematuria)      | <p>Know the etiology, pathophysiology and immunological basis of glomerulonephritis and vasculitis</p> <p>Understand the investigations that will differentiate between the causes</p> <p>Be aware of the range of immunosuppressive therapies that may be used in these conditions</p>   | <p>Know the features that are prognostically significant</p> <p>Know the range of immunosuppressive therapies that may be used in these conditions</p> <p>Recognize features in the presentation that may suggest serious or unusual pathology</p> |
| Acute renal failure              | <p>Know the causes of acute renal failure</p>   | <p>Be able to assess and initiate management of life-threatening events e.g. hyperkalemia</p>  |

| Skills  | Years 1 and 2   | Years 3 and 4  |
|---|---|--|
|   | <p>Understand the investigations that may differentiate between these causes</p> <p>Know the features of hemolytic uremic syndrome</p> <p>Understand the methods to correct fluid and biochemical abnormalities seen in renal failure</p> <p>Know the indications for dialysis</p>                      |  |
| Hypertension  | <p>Know the techniques of blood pressure measurement</p> <p>Know the causes of hypertension and the principles of treatment</p>   | <p>Be able to initiate management under supervision</p> <p>Be able to liaise with specialists effectively</p>  |
| Stones  | <p>Know the causes of renal stone formation</p>   | <p>Be able to recognize presenting features</p> <p>Have a structured approach to investigate renal stones</p>  |
| Voiding disorders including enuresis, dysuria, frequency and polyuria | <p>Be able to take a detailed voiding history</p> <p>Understand the principles of investigation of urinary tract infection and management of vesico-ureteric reflux</p> <p>Understand the principles of managing enuresis</p> <p>Be able to interpret common urine microscopic and culture findings</p> | <p>Be able to initiate management under supervision.</p> <p>Be aware of the association of genito-urinary symptoms with child sexual abuse</p> <p>Be able to investigate and manage UTI within guidelines</p> <p>Know how to provide long-term management of voiding disorders within guidelines</p> |
| Urogenital abnormalities  | <p>Know when surgical referral is required for circumcision, impalpable testes, hypospadias or suspected urinary tract obstruction</p> <p>Be able to examine the genitalia appropriately and with sensitivity</p>   | <p>Recognize inflammatory or traumatic lesions</p>   |
| Chronic renal failure   | <p>Know the causes and natural history of conditions causing</p>  | <p>Identify growth and nutritional problems and use dietetic</p>   |

| Skills                                      | Years 1 and 2  | Years 3 and 4   |
|---|--|---|
|   | <p>chronic renal failure</p> <p>Understand the pathophysiology of bone disease, anemia and growth failure</p>  | <p>support effectively</p>  |
| <p><b>Tubular disorders</b></p>             | <p>Know the range of presentations suggestive of an underlying renal tubular disorder</p> <p>Know about the inheritance patterns of different tubular disorders</p>  | <p>Be able to recognize and interpret electrolyte and acid-base abnormalities in blood and urine</p>  |
| <p><b>Neurology and Neurodisability</b></p> | <p>Have knowledge and understanding of the pathophysiology of common disorders affecting the nervous system</p> <p>Understand concepts of disability and what this means for the child and family</p> <p>Be able to take an accurate neurological and neuro-developmental history</p> <p>Be able to examine the nervous system of a newborn baby, child and young person</p> <p>Be able to perform a reliable assessment of neuro-developmental status at key stages, including the newborn period, the first year of life, nursery age, school entry and late primary education</p> <p>Have the knowledge and skills to be able to initiate management of children with neurological and neurodisabling conditions in acute settings</p> <p>Understand the life-threatening nature of acute neurological deterioration and when to call for help</p> <p>Understand the principles and use of neuro-radiological imaging</p> | <p>Have experience of a range of communication skills with disabled children, their families and other professional</p> <p>Be aware of local services and how to access them</p> <p>Have experience of working with other services outside neurology and neurodisability such as child protection, education, services for looked after children and adult services</p> <p>Be able to recognize and come to a likely diagnosis of common developmental disorders such as cerebral palsy, dyspraxia, ADHD, specific learning difficulties and arrange timely and appropriate specialist assessment</p> <p>Know how equipment can be used to lessen the effects of disability and how to refer</p> <p>Know about and be prepared to find out about self-help and support groups for children and their families with conditions in their specialist area and be aware of the requirement to tell parents about these groups</p> |

| Skills  | Years 1 and 2  | Years 3 and 4   |
|---|--|---|
|   | <p>Have a basic understanding and experience of neuro-physiological tests</p> <p>Understand the impact of developmental disorders on the life of child and family at different developmental stages</p>  |   |
| Seizures  | <p>Know the common causes of seizures in newborn babies and children</p> <p>Be aware of common epileptic syndromes</p> <p>Understand the principles of initial and continuing anticonvulsant therapy in babies and children.</p> <p>Understand the place and principles of the EEG and neuro-imaging in investigation</p> <p>Be able to initiate treatment for acute continuing seizures</p> <p>Be able to form a differential diagnosis</p> | <p>Understand the links between epilepsy and behavior problems</p> <p>Know about the long term implications of epilepsy, including different epilepsy syndromes and the risk of learning difficulties, accident or sudden death</p> <p>Be able to decide initial and continuing anticonvulsant therapy in babies and children</p> <p>Be able to advise parents about education and safety</p> <p>Work effectively with the multidisciplinary team and lead the care maintaining patient safety until that team takes over</p> |
| Acute focal neurological signs                    | <p>Understand the implications of acute focal neurological signs</p> <p>Understand the principles of investigation</p> <p>Begin to gain experience of interpretation of CT and MRI scans</p>   | <p>Have experience of interpretation of CT and MRI scans</p> <p>Be able to give diagnoses to parents, and be able to share difficult information effectively and compassionately</p>  |
| Ataxia, clumsiness and abnormal movement patterns | <p>Know the common possible causes of ataxia, clumsiness and abnormal movement patterns</p> <p>Know the indications for investigations</p> <p>Be able to recognize the signs</p>   | <p>Recognize which urgent investigations are needed</p>   |
| Hypotonia, neuropathies and myopathies            | <p>Know the common possible causes of hypertonia, neuropathies and myopathies</p>  | <p>Be able to initiate appropriate tests</p> <p>Be able to initiate and interpret appropriate tests, seeking expert</p>   |

| Skills   | Years 1 and 2   | Years 3 and 4   |
|--|---|---|
|  | Know about the relevant neurophysiological and metabolic investigations   | advice as appropriate   |
| Meningism and altered consciousness              | <p>Understand the principles of treatment</p> <p>Know about prophylactic therapy for contacts of meningitis</p> <p>Know when it is safe to perform a lumbar puncture</p> <p>Use a validated coma score</p> <p>Recognize signs and implications of raised intra-cranial pressure</p> | <p>Assess and manage early presentations of meningitis and encephalitis</p> <p>Assess and initiate management of raised intra-cranial pressure</p>  |
| Neuro-developmental regression                   | <p>Be familiar with the main investigations that will differentiate between the causes of neuro-developmental regression and how to access further expert help</p> <p>Understand the implications</p> <p>Be able to assess development</p>  | Be able to recognize regression of developmental skills and refer appropriately for investigation   |
| Disordered development                           | <p>Understand the common causes of disability, disordered development, and learning difficulties</p> <p>Understand the complications of cerebral palsy and disordered development</p> <p>Know the common causes</p>   | <p>Know about common secondary disabilities and co-morbidities</p> <p>Recognize common causes of disordered development, manage simple problems and refer complex difficulties appropriately for specialist investigation and assessment</p>  |
| Speech and language delay including hearing loss | <p>Be aware of the importance of hearing assessment in children</p> <p>Recognize the need for referral to audiology specialists or to an ENT surgeon</p> <p>Know the principles of hearing testing at all ages</p>  | <p>Know about multi disciplinary investigation and therapy for those with more complex disorders</p> <p>Know the support available for hearing impaired children</p> <p>Recognize autistic features in disordered developmental assessments and know how to refer appropriately</p> |
| Abnormal head size and shape                     | Be aware of the common causes of hydrocephalus, macrocephaly and microcephaly   | Know how to recognize abnormal head shapes and to differentiate between serious and non serious causes  |

| Skills               | Years 1 and 2   | Years 3 and 4   |
|----------------------|---|---|
| Headache             | <p>Be able to plot and interpret a head growth chart</p> <p>Be aware of the possible biological, psychological and social factors that can contribute to headache</p> <p>Be able to recognize when headache may indicate serious illness</p>  | <p>Be able to reach a likely diagnosis and initiate investigations for abnormal head growth</p> <p>Be able to recognize when headache may indicate serious illness and arrange prompt investigations</p> <p>Be able to recognize and manage common causes of recurrent headache including non-organic causes, tension headache and migraine</p>   |
| <b>Ophthalmology</b> | <p>Be able to examine the eye and recognize those abnormalities which require urgent referral or treatment</p> <p>Be able to take a relevant history for a child with suspected visual impairment</p> <p>Be able to use an ophthalmoscope to recognize an abnormal fundus and lens opacity</p> <p>Know the principles of visual acuity testing at various ages</p> <p>Understand the microbiology and treatments for common eye infections including orbital cellulitis</p> <p>Know about the eye manifestations of common genetic and systemic diseases</p> <p>Recognize and interpret abnormal eye movements</p> <p>Know the common causes of red eye and initiate investigations and manage appropriately</p> <p>Know the causes of acute onset and the congenital causes of a squint</p> <p>Be able to recognize abnormal alignment of the eyes and</p> | <p>Be able to undertake visual acuity testing at various ages</p> <p>Know about the implications of nystagmus and refer appropriately for further visual assessment</p> <p>Know the value of fundal examination in suspected child abuse cases and certain developmental syndromes</p> <p>Know the common and preventable causes of visual impairment</p> <p>Have experience of assessment of the child with suspected visual impairment</p> <p>Know about the investigations that might be used to find a cause of visual impairment</p> <p>Know about the specific developmental patterns that occur in the child with visual impairment</p> <p>Know about educational approaches to the child with visual impairment</p> <p>Be able to recognize congenital cataract and refer urgently for further management</p> |

| Skills                 | Years 1 and 2  | Years 3 and 4  |
|------------------------|--|--|
|                        | <p>examine corneal reflexes</p> <p>Know about the congenital and acquired causes of ptosis.</p> <p>Know the common causes of proptosis and initiate appropriate investigations</p> <p>Know the ocular and neurological causes of benign abnormal eye movements</p> <p>Be able to undertake a full neurological examination where appropriate</p> <p>Be able to identify papilledema</p>  |  |
| <b>Palliative Care</b> | <p>Be familiar with local and national guidelines on withdrawing and withholding treatment</p> <p>Be familiar with guidelines on the management of sudden infant death</p> <p>Be aware of legal and ethical issues relating to withdrawing life support</p> <p>Recognize factors which determine when care of a patient becomes palliative</p> <p>Be aware of the ethical issues in therapeutic intervention in children with life-limiting conditions</p> <p>Know the tests for brain stem death</p> <p>Recognize the skills and experience of other</p> <p>Understand the need for respect of the wishes of the child or your person particularly when these are different from those of</p> | <p>Know about guidelines on the management of sudden infant death</p> <p>Know about the broad definition of palliative care in childhood</p> <p>Be able to lead the management of acute presentations of sudden unexpected deaths in infancy and childhood and be able to put local procedures into action</p> |



| Skills                              | Years 1 and 2   | Years 3 and 4  |
|-------------------------------------|---|--|
| <b>Respiratory and ENT</b>          | <p>the family and health professionals</p> <p>Have the knowledge and skills to be able to assess and initiate management of patients presenting with respiratory problems in acute and outpatient settings</p> <p>Have the knowledge and understanding of factors relating to long term management of chronic respiratory problems</p> <p>Understand the life threatening nature of some of these conditions and when to call for help</p> <p>Know the causes of these complaints</p> <p>Know appropriate therapies</p> <p>Know the causes of snoring</p> <p>Be aware of complications of this presentation</p> | <p>Recognize factors which suggest underlying or serious pathology</p>   |
| Sore throat and/or mouth            |   | <p>Be able to manage these conditions</p>  |
| Snoring and obstructive sleep apnea |   | <p>Recognize features in the presentation which suggest serious pathology</p> <p>Understand the indications for sleep studies.</p> <p>Be able to refer appropriately to an ENT surgeon</p> |
| Earache                             | <p>Know the common causes and complications</p> <p>Know the risk factors for otitis media with effusion</p> <p>Understand the vulnerability of children with cleft palate</p> <p>Recognize an abnormal ear drum</p> <p>Recognize when to treat with antibiotics</p>   | <p>Recognize when to refer to audiology specialists or an ENT surgeon</p> <p>Be able to treat with antibiotics where appropriate</p>   |
| Acute stridor                       | <p>Understand the potentially life-threatening nature of this condition</p> <p>Know about allergic and infective causes e.g. epiglottitis, laryngotracheitis, retropharyngeal abscess, and foreign body</p> <p>Recognize when to request help from a senior colleague</p>   | <p>Recognize children with existing chronic upper airway problems</p> <p>Be able to manage this condition</p>  |

| Skills  | Years 1 and 2  | Years 3 and 4  |
|---|--|--|
| Acute severe asthma   | <p>Be able to assess the severity of an asthma attack</p> <p>Be familiar with the evidence-base medicine guidelines for management</p> <p>Be able to institute appropriate emergency treatment</p>   | <p>Be able to lead treatment of severe asthma and review ongoing treatment before discharge</p>  |
| Lower respiratory tract infection (including pneumonia and bronchiolitis) | <p>Be familiar with the causes of respiratory tract infections</p> <p>Know appropriate therapies</p> <p>Be familiar with indicators of severity</p> <p>Be able to initiate appropriate therapies</p> <p>Be able to recognize patients requiring intensive care</p> | <p>Be able to recognize complications e.g. empyema</p> <p>Be able to manage these infections</p> <p>Be able to recognize complications e.g. empyema and manage appropriately</p>   |
| Respiratory failure   |  | <p>Know the indications for ventilation</p> <p>Be aware of the agreed resuscitation plans for individual patients</p> <p>Initiate urgent assessment and treatment including assisted ventilation</p> <p>Liaise with more senior pediatricians, anaesthetists and intensivists when appropriate</p> |
| Asthma  | <p>Be familiar with the evidence-base medicine guidelines for management of asthma</p> <p>Know about the patterns of asthma and contributing factors</p> <p>Know about the complications of long-term use of medications for asthma</p>                            | <p>Institute age-appropriate individualized management plan for asthma</p> <p>Be able to modify an asthma management plan appropriately</p> <p>Be aware of what needs to be done to ensure the child has access to emergency treatment at school and other settings</p>                            |

| Skills   | Years 1 and 2  | Years 3 and 4   |
|--|--|---|
|  | <p>Teach children how to use a peak flow meter and diary</p> <p>Teach and assess inhaler technique</p>   |   |
| Recurrent or chronic chest infection                                       | <p>Know the respiratory and non-respiratory causes, including chronic aspiration, of recurrent or chronic chestiness</p> <p>Know about predisposing conditions such as neuromuscular and skeletal disorders and immunodeficiency</p>   | <p>Know about the role of bronchoscopy, pH studies and video-fluoroscopy</p> <p>Recognize features in the presentation which suggest serious or unusual pathology e.g. atypical presentations of cystic fibrosis</p> <p>Know how to perform and interpret basic lung function tests</p>   |
| Cystic fibrosis  | <p>Know and understand the pathophysiology and natural history of cystic fibrosis</p> <p>Understand the principles of treatment</p>  | <p>Understand the diagnostic tests available</p> <p>Work with a multi-disciplinary team, particularly physiotherapy and dieticians</p>  |
| <p><b>Safeguarding</b></p> <p>Acute presentation and physical injuries</p> | <p>Know how to assess physical injury in relation to history, developmental stage and ability</p> <p>Know about acute and chronic presentations of subdural hemorrhage</p> <p>know that sexual abuse forms part of the differential diagnosis for rectal and vaginal bleeding</p> <p>Know that suffocation is a possible cause of acute life threatening event</p> | <p>Know appropriate investigations when child abuse is a possibility e.g. skeletal survey</p> <p>Know that, when there is suspicion of non-accidental head injury, an ophthalmologist should be involved</p> <p>Know when an expert genital examination is needed and the role of colposcopy as part of that</p> <p>Refer promptly to an experienced colleague for help</p> |
| Outpatient presentation  | Be aware that growth faltering can be of non organic cause   | Be able to ask for appropriate investigations for growth faltering  |

| Skills | Years 1 and 2  | Years 3 and 4  |
|--------|--|--|
|        | <p>Know that soiling and bed wetting can be a presentation of emotional abuse or neglect</p> <p>Know that vaginal discharge can be a presentation of sexual abuse</p> <p>Know the possible signs of factitious and induced illness</p> | <p>Know when an expert genital examination is needed</p> <p>Know the pathways to gather medical, educational and social information on the child</p> |

### ***C. Procedural competencies***

Residents are to achieve competence in the following procedures over the four year program. A reference for clinical procedures is the Harriet Lane Handbook 20th Edition cited in Section 7. In addition there are protocols for some procedures available at the training institution. The required number of procedures to be completed is reflected in the table below and is to be recorded in the log book:

| <b>No.</b> | <b>Procedure name</b>   | <b>Number required</b> |
|------------|---|------------------------|
| 1          | Abdominal paracentesis  | 2                      |
| 2          | Administration of intradermal, subcutaneous, intramuscular or intravenous injections. | 10                     |
| 3          | Arterial/ venous sampling   | 5                      |
| 4          | Bag and mask ventilation  | 10                     |
| 5          | Bedside Measurement of glucose  | 5                      |
| 6          | Electrocardiogram   | 5                      |
| 7          | Endotracheal intubation   | 10                     |
| 8          | Exchange transfusion  | 2                      |
| 9          | Gastric lavage  | 5                      |
| 10         | Intercostal chest tube insertion and aspiration                                       | 3                      |
| 11         | Intraosseous needle insertion   | 2                      |
| 12         | lumbar puncture   | 15                     |
| 13         | Nasogastric tube insertion  | 10                     |
| 14         | Peripheral Arterial / venous cannulation  | 10                     |
| 15         | Pneumothorax needle aspiration  | 3                      |
| 16         | Routine testing of urine  | 3                      |
| 17         | Suprapubic aspiration of urine  | 5                      |
| 18         | Suturing of simple cuts and wounds  | 3                      |
| 19         | Umbilical artery and venous cannulation and sampling                                  | 5                      |
| 20         | urinary catheterization   | 5                      |
| 21         | Administration of surfactant  | 5                      |
| 22         | Bone Marrow aspiration  | 5                      |
| 23         | Bone marrow biopsy  | 2                      |
| 24         | Guthrie Card Specimen   | 5                      |
| 25         | Tuberculin Skin Test  | 3                      |
| 26         | Pericardial aspiration  | 1                      |
| 27         | Using growth charts   | 50                     |
| 28         | Taking throat swab for culture  | 5                      |
| 29         | Skin biopsy   | 1                      |
| 30         | Central line insertion  | 2                      |

## Section 3: Regulations and Requirements of the Residency Program

Residents' admission requirements are according to Palestine Medical Council regulations. **PMC Website:**  
<http://www.pmc.ps>

### Rotation

Residents will train in the following pediatric areas and the time allocated to each area is given in Table 1 below

- General Pediatric Department
- Neonatal Unit and Maternity (Nursery)
- Pediatrics ICU
- Out-patient clinic/Emergency Room
- Subspecialty dept.
- Elective

**Table 1: Time allocation to different pediatric areas in years 1 to 4 of the residency program**

| Area                                   | Year 1         | Year 2   | Year 3   | Year 4   |
|--|----------------|----------|----------|----------|
| Pediatric Ward                         | 7 months       | 4 months | 4 months | 3 months |
| Neonatology                            | 3 months       | 3 months | 3 months | 2 months |
| Pediatric ICU                          | Not applicable | 2 months | 2 months | 3 months |
| Out patient clinic /<br>Emergency Room | 2 months       | 2 months | 2 months | 2 months |
| Subspecialty/Elective                  | Not applicable | 1 month  | 1 month  | 2 months |

### Vacation

Any vacation should not exceed 20% of a specific pediatric area.

## **Section 4: Teaching and Learning Methods**

Teaching and learning should be through a variety of methods. It is essential that the resident is self motivated to learn. Acquiring and reading appropriate text books, on line resources such as websites, courses and webinars, and observation of more senior staff should all contribute to personal learning. In the portfolio, interesting cases should be recorded so that the presentation and management can be researched for further learning.

The training facilities will provide many local, less formal opportunities for learning including; daily morning report and in patient ward round. Pediatric departments should hold clinical education meetings including weekly grand rounds, weekly multispecialty meetings, weekly Journal club and monthly morbidity and mortality meeting. Audit and critical appraisal should be part of all the clinical education meetings.

Some courses will be compulsory including BLS, PALS and NRP. It may be possible for other courses to be arranged and the resident is encouraged to identify other relevant courses and attend them.

Learning and teaching should be supported by protected time for all the scientific activities. It is a two-way process and both the trainers and the trainee should be actively involved in the scientific activities. Mentorship should be facilitated which will help the trainee to achieve their goals.

## Section 5: Assessment Methods and Evaluation Tools for Residents

To assess the level of competence achieved at different stages of the residency program requires a range of assessment methods. While examinations provide assessment of knowledge, clinical skills require assessment in the workplace and so assessment by training consultants in the local hospitals will be important. Non-clinical skills will be assessed using multi-source feedback (MSF) in addition to the annual report. A summary of the assessment methods used across the competencies is set out in table below.

| Competency type                                     | Teaching methods   | Year 1 / 2 assessment methods  | Year 3 / 4 assessment methods   |
|---|--|--|---|
| Good Clinical Care                                  | Clinical practice, grand rounds, lectures, self- learning, in-line courses                           | Mini-Clinical Examinations (MiniCex), Case Based Discussion (CBD), MSF, Board Exam in year 2 and Annual Report | Board exam at the end of year 4 with satisfactory annual report, portfolio and MSF                          |
| Maintaining good medical practice                   | Clinical practice, grand rounds, lectures, self- learning, on-line courses                           | Board Exam in year 2, MSF, Portfolio   | Board exam at the end of year 4 with satisfactory annual report, portfolio and MSF                          |
| Interpersonal & communication skills                | Clinical practice, grand rounds, lectures and small group discussions                                | Mini-Clinical Examinations (MiniCex), Case Based Discussion (CBD), MSF and Annual Report                       | MiniCex, (CBD), MSF and Annual Report   |
| Team work and interprofessional collaboration       | Clinical practice, grand rounds, lectures and small group discussions                                | MiniCex, CBD, MSF and Annual Report  | MiniCex, CDB, MSF and Annual Report   |
| Leadership promotion                                | Clinical practice, grand rounds, lectures and small group discussions                                | MiniCex, CBD, MSF and Annual Report  | MiniCex, CBD, MSF and Annual Report   |
| Teaching and learning                               | Clinical practice, grand rounds, lectures and small group discussions                                | MiniCex, CBD, MSF and Annual Report  | MiniCex, CBD, MSF and Annual Report   |
| Professionalism, ethics and research                | Clinical practice, grand rounds, lectures and small group discussions                                | CBD, MSF and Annual Report   | CBD, MSF and Annual Report  |
| Clinical knowledge, skills, attitudes and behaviors | Clinical practice, grand rounds, lectures, self learning, seminars, on-line courses.                 | Board Exam in year 2. MiniCex, CBD.  | Board exam at the end of year 4 with satisfactory annual report and satisfactory portfolio. MiniCex and CBD |
| Life Support skills                                 | Accredited Basic Life Support, Pediatric Advanced Life Support and NRP courses and clinical practice | Knowledge and practical skills examination in BLS and NRP in year 1 and PALS in year 2                         | Knowledge and practical skills examination in refresher BLS, NRP and PALS courses in year 4.                |
| Procedural  | Self learning, bedside teaching, clinical practice   | Log book, portfolio and Annual Report  | Log book, portfolio and Annual Report   |



## **Examinations**

Part 1 Palestinian Pediatric Medicine Board exam is taken after passing the first year and has a Multiple Choice Questions (MCQ) format. The Board part 1 should be passed before the start of year 3.

Part 2 Palestinian Pediatric Medicine Board exam is taken at the end of year 4. It has MCQ, and Observed Structured Clinical Examination elements.

Promotional / progress exams are taken to confirm progress at the end of each year of the program. These are MCQ exams set by the training facility and administered by the responsible body.

## **Portfolio / Case Report Diary**

A portfolio is a 'purposeful collection of student work that exhibits the student's efforts, progress and achievements in one or more areas. The collection must include student participation in selecting contents, the criteria for selection, the criteria for judging merit and evidence of self reflection'. Paulson et al., (1991)

The portfolio should have the following sections. Residents must complete at least one entry per month in each of the first 5 sections.

1. Clinical experiences with patients
2. A reflective journal or diary
3. Teaching and presentations done
4. Articles and texts reviewed critically
5. Tutorials and learning plan with reflection
6. Curriculum vitae
7. Audits

In Section 1 each resident should write up at least one clinical case per quarter (minimum of 16 by the end of year 4) as part of the portfolio to be submitted to the resident's consultant trainer for signature. The cases should cover different conditions and the resident should have been personally involved in the patient's care. Each case should include a description of the history, examination, investigations, treatment and subsequent progress together with a short (<500 words) commentary on the case. The whole portfolio with proper authorized signatures should be submitted to the Medical Council at the end of the residency period as a condition of successful completion of the training program.

A Standard template for the case report will be developed and utilized

## **Logbook**

Each resident should keep a logbook of procedures completed. The supervising consultant should sign the logbook at the end of the rotational placement

A Standard logbook will be developed and utilized

### *Basic Life Support and Advance Pediatric Life Support courses*

The Basic Life Support and Advanced Pediatric Life Support courses have their own assessment methods. Certificates will be proof of successful completion of these courses

## **Multisource feedback**

The multisource feedback (MSF) tool is used to collect colleagues' opinion on the resident's clinical performance and professional behavior. The MSF should be conducted yearly for each resident and placed in their file. The consultant who supervises the resident will collect anonymous MSF from the resident's colleagues including nurses, peers and consultants involved in training the resident. The Palestine Medical Council will provide further guidance on the MSF methodology and tool to the training institutions in writing.

## **Supervised Learning Events (SLE)**

Residents will complete Case Based Discussions (CBD's) and Mini-Clinical Examinations (MiniCex) as a structured way to assess progress in clinical and procedural competency.

## **Annual Report on Competency Progression (ARCP) Subjective or objective**

At the end of each year, the supervising consultant will write an annual report for the Palestine Medical Council with a copy in the file of the resident in the training hospital. The report must be discussed with the resident each year. An Annual Report format (Appendix 1)

The Pediatric Medicine Scientific program director will conduct interviews with each of the residents in the Pediatric Medicine residency training program at the end of year 2 and year 4. These interviews allow the resident and committee to review the training progress together, using the annual reports, examination outcomes, portfolio, logbook, courses, supervised learning events and multisource feedback. The interview should provide an opportunity for open and constructive dialogue of the resident's progress.

## Annual Resident Performance evaluation

Resident Name: \_\_\_\_\_ Training year: 1<sup>st</sup> 2<sup>nd</sup> 3<sup>rd</sup> 4<sup>th</sup> 5<sup>th</sup> Department: \_\_\_\_\_

| <b>I. General Competencies</b><br>5 marks for each competency | Unsatisfactory<br>(1,2) | Satisfactory<br>(3,4) | Superior<br>(5) |
|---|-------------------------|-----------------------|-----------------|
| Maintaining good medical practice                             |                         |                       |                 |
| Interpersonal and communication skills                        |                         |                       |                 |
| Team work & interprofessional collaboration                   |                         |                       |                 |
| Leadership promotion  |                         |                       |                 |
| Teaching and learning   |                         |                       |                 |
| Professionalism and ethics                                    |                         |                       |                 |
| <b>Total marks [30]</b>                                       |                         |                       |                 |
| <b>II. Procedures: [10]</b><br>logbook                        |                         |                       |                 |
| <b>III. In-training &amp; End of year Exams (60)</b>          |                         |                       |                 |
| In – training Exam (s) [25]                                   |                         |                       |                 |
| End of year Exam [25]   |                         |                       |                 |
| Clinical knowledge and skill<br>(MiniCex, CBD) [10]           |                         |                       |                 |
| <b>Total marks: I, II &amp; III (100)</b>                     |                         |                       |                 |

### IV. Recommendations:

|  |  |
|--|--|
|  | Appointment to next year of training with no reservation               |
|  | Appointment to year of training with accompanying letter of deficiency |
|  | Extend year: repeat year   |

|                    |                            |
|--------------------|----------------------------|
| Resident signature | Department Chief signature |
|                    |                            |
| Date:              | Date:                      |

\*This form should be filled based on different assessment tools for example CBD.

## **Section 6: Assessing The Implementation Of The Curriculum**

Technical clarifications and minor revisions of this curriculum may be issued periodically by the Palestine Medical Council. Every 5 years the Pediatric Medicine Scientific Committee of the Palestine Medical Council will initiate a comprehensive review of the curriculum's technical content, involving local stakeholders and possibly external experts. Updates to the curriculum will be made in line with the latest scientific information and evidence based updates in the field, as well as any updates to the Arab Board guidelines.

Ongoing assessment of the program will be done by the Pediatric Medicine Scientific Committee following the interviews with residents in year 2 and 4 of training. The information gathered in these interviews will allow the committee to summarize trends based on residents' experiences, identify strengths and areas for improvement, and identify actions to follow up.

The Pediatric Medicine Scientific Committee will also conduct a yearly meeting with stakeholders from the teaching institutions to get their comments and feedbacks on the strengths of the program and challenges, and take appropriate action.

## Section 7: References

Technical content for this curriculum was adapted from the General Pediatric Curriculum of the Royal College of Paediatrics and Child Health and the Omani and UAE frameworks. Links to these curricula can be found online at

RCPCH <http://www.rcpch.ac.uk/system/files/protected/page/August 2015 General Paediatrics Curriculum 0.pdf>

Child Health Residency Program; Oman Medical Specialty Board:  
<http://omsb.org/Files/ChildHealth/ChildHealthCurriculum.pdf>

Ibrahim H., Al Tatar H., Holmboe E. S. The transition to competency-based pediatric training in the United Arab Emirates. *BMC Med. Educ.* 2015; 15:65

### **Basic textbooks that meet the requirements of curriculum:**

Nelson Textbook of pediatrics 20th Edition  
Rudolph Textbook of pediatrics 22nd Edition  
The Harriet Lane Handbook 20th Edition

### Other useful websites

Royal College of Paediatrics and Child Health: <http://www.rcpch.ac.uk>

American Academy of Pediatrics: <https://www.aap.org>

Canadian Pediatric Society: <http://www.cps.ca>