



الهيئة السعودية للتخصصات الصحية
Saudi Commission for Health Specialties

PAEDIATRICS



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PROGRAM CURRICULUM



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1. General Information

The Saudi Commission for Health Specialties (SCFHS) has identified an opportunity to develop post-graduate diplomas that will facilitate an alternative health career path for doctors not engaged in board specialist training – the Saudi Postgraduate Diploma (SPD). The goal of these diplomas is to fulfill a need for young Saudi doctors to upgrade their level of expertise in a particular specialty to that of Registrar. Graduates of the SPD will be entitled to a Registrar post after they successfully complete both the diploma itself and two years of experience in the specialty area after completing the diploma.

The vision is that these diplomas will leverage advances in technology to deliver standardized, blended learning programs that will enable trainees to achieve the requisite expertise while maintaining their current clinical workload.

The diplomas are two years in duration and will include a well-defined curriculum with clear learning outcomes, expected clinical and knowledge-based competencies, as well as a number of elearning modules that must be completed. They will be aimed at general practitioners (GPs) employed in various hospitals in the Kingdom and continued employment within a hospital facility for the duration of the diploma is required. Each GP/trainee will be supervised and guided through the diploma, which will include a blend of self-directed learning as well as supervised learning and evaluation.

At the end of the diploma trainees will sit a formal examination administered by the SCFHS. In addition, there are a number of supervised competency-based evaluations throughout the two years. Upon successful completion of the diploma the trainee will be awarded the SPD in Paediatrics.

This program has been developed in partnership with the SCFHS, healthcare professionals and educators with expertise in Paediatrics.

We would also like to acknowledge that the CanMEDS framework is a copyright of the Royal College of Physicians and Surgeons of Canada, and many of the description's competencies have been acquired from their resources (Please refer to: CanMEDS 2015 physician competency framework; Frank JR, Snell L, Sherbino J, editors. CanMEDS 2015 Physician Competency Framework. Ottawa: Royal College of Physicians and Surgeons of Canada; 2015.).

The following team, which includes the SCFHS Scientific Committee, contributed to the development of the curriculum:

- **Dr Alastair Yim – Paediatric Consultant, Queen Elizabeth Hospital, London**
- **Dr Sultan AlEnezi -Paediatric Rheumatology Consultant, Security Forces Hospital - Riyadh**
- **Dr Sulaiman AlQueflie, Paediatric Consultant, King Abdullah Specialized Children Hospital, Riyadh**
- **Dr Manal Bawazeer, Paediatric Consultant, King Abdullah Specialized Children Hospital, Riyadh**

Note that this Curriculum Document does not specify general course/program management and delivery policies and procedures as it is assumed they will be adapted from the SCFHS guidelines or the Academic Healthcare Facility. These include policies such as Admissions, Trainee Registration, Deferrals, Plagiarism, Late/Missing Submissions, Exam-boards, Releasing Results, Issuing of Awards etc.

2. Introduction

Paediatrics is the specialty of medical science concerned with the physical, mental, and social health of children from birth to young adulthood. Paediatric care encompasses a broad spectrum of health services ranging from preventive health care to the diagnosis and treatment of acute and chronic diseases (American Academy of Paediatrics 2014).

The aim of this curriculum is to identify the competencies considered essential for a non-specialist doctor working in Paediatric settings within the Kingdom. This curriculum gives the trainee and their educational supervisors details about the areas of knowledge that need to be covered.

The Paediatrics diploma will provide participants with a broad range of knowledge, skills and behaviours to be able to practice independently in children's outpatients, children's inpatient wards and children's emergency departments. Graduates will be eligible to apply for a post at the Registrar level.

The Paediatrics Diploma requires participants to undergo a total of 24 months (including annual leave) supervised training in an SCFHS approved training facility, as well as rotations in Paediatric Emergency Medicine, Neonatal ICU and family medicine.

2.1 Scope of Practice

Graduates of the SPD in Paediatrics will be eligible to work at Registrar level, working independently without on-site supervision. It is anticipated that trainees will have direct access to specialist consultants during the diploma and that graduates will have remote access to consultants whilst working in a community setting.

The competent registrar is expected to:

- Be competent in conducting a paediatric history and examination in children of all ages.
- Show awareness of their own limitations and know when to seek senior support.
- Formulate appropriate differential diagnosis and commence an initial management plan.
- Safely carry out key Paediatric and neonatal procedures.
- Demonstrate effective communications skills with children and their families.
- Function well in a multidisciplinary team.

2.2 Target Audience

General practitioners and other physicians who have at least one year's experience working in a Paediatrics department in Saudi Arabia.

3. Rationale for the Diploma

The SCFHS is introducing a new career path for medical graduates that will deliver doctors with the knowledge, skills and attitudes to work at Registrar level. The rationale for this new development is that there is a need to address the professional development needs of doctors that are staffing Children's Departments, but who are not pursuing formal specialist training. This diploma provides the academic structure that, when combined with a defined period of clinical experience, will bring doctors along the new career path.

4. Aims and Objectives

The principal objectives of the diploma are to:

- Take trainees through the Paediatric curriculum in a systematic and structured fashion so that graduates will have an approach to managing the sick child and common diseases of childhood.
- Deliver the competencies that will allow graduates to practice effectively at Registrar level in Paediatrics.
- Ensure trainee competence in key procedural skills.
- Use a blended learning approach to complement work place Paediatric experience.
- Foster an appreciation of self-directed learning that will carry over into graduates' continuing professional development.

4.1 Competencies of Paediatricians

In keeping with the key competencies set out in the Saudi Board Paediatrics Curriculum, this document uses the CanMEDS framework of competencies expected of physicians. CanMEDS is being adopted across all the SPDs, and is defined as follows:

'CanMEDS is a framework that identifies and describes the abilities clinicians require to effectively meet the health care needs of the people they serve. These abilities are grouped thematically under seven roles.' Royal College of Physicians and Surgeons of Canada, 2015

This curriculum uses the CanMEDS framework to guide trainees with regards to the generic competencies expected of Paediatricians. Each topic should be examined through the seven domains of the framework by trainees. The SPD in Paediatrics should produce physicians with the following basic competencies:

1. Medical Expert

As Medical Experts, Paediatricians integrate all of the CanMEDS roles, applying medical knowledge, clinical skills and professional attitudes in their provision of patient-centred care. Medical Expert is the central physician role in the CanMEDS framework.

2. **Communicator**
As Communicators, Paediatricians effectively facilitate the doctor-patient relationship and the dynamic exchanges that occur before, during and after the medical encounter.
3. **Collaborator**
As Collaborators, Paediatricians effectively work within a health care team to achieve optimal patient care.
4. **Manager**
As Managers/Leaders, Paediatricians are integral participants in health care organisations, organising sustainable practices, making decisions about allocating resources, and contributing the effectiveness of the health care system.
5. **Health Advocate**
As Health Advocates, Paediatricians responsibly use their expertise and influence to advance the health and well-being of individual patients, communities and populations.
6. **Scholar**
As Scholars, Paediatricians demonstrate a lifelong commitment to reflective learning, as well as the creation, dissemination, application and translation of medical knowledge.
7. **Professional**
As Professionals, Paediatricians are committed to the health and well-being of individuals and society through ethical practice, professional-led regulation and high personal standards of behaviour.

5. Entry Criteria

The following entry criteria are required to successfully enrol in this diploma:

- Please refer to the updated executive policy of SCFHS on admission and registration.
Website: www.scfhs.org.sa

Following acceptance onto the diploma trainees will be expected to complete the following courses prior to commencing the diploma:

- Ethics
- Communication Skills
- Patient Safety
- Infection Control

6. Program Structure

The SPD in Paediatrics is a fully supervised course that is delivered over a two-year period. Trainees will rotate through different areas of Paediatric medicine to gain as much experience as possible within each specialty. Rotations will remain within the Paediatric department, except for paediatric emergency medicine and family medicine.

The program comprises a number of modules which are outlined below. Each module has a set of learning outcomes and topics to be covered. Some modules also have linked practical procedures and data interpretation skills. Each module is described in detail in Section 12.

The 'Neonatology' model is best timed to the NICU attachment. The remaining modules are otherwise mapped to a particular time in the two-year calendar, although it is acknowledged that maintaining a strict timeframe for the modules is not always possible.

Clinical knowledge and skills will be learnt through on the job training under supervision and guidance from experienced practitioners. Trainees will have access to specialists from different areas of expertise, as well as appropriate training facilities. This traditional method of learning will be augmented with e-learning modules and recommended reading that will guide trainees through some of the key topics related to the module. Learning will also be driven by the trainee by initiating a specified number of workplace assessments for each module. These assessments include Directly Observed Procedural Skills (DOPS), Mini Clinical Evaluation Exercises (Mini CEX) and Structured Case reports with a reflective element.

Trainees will also be expected to complete the Paediatric Advanced Life Support (PALS), Neonatal resuscitation Program (NRP) and Paediatric Mechanical Ventilation courses.

As trainees work their way through each module, the online learning platform will allow them to keep track of their progress and view any outstanding modular requirements.

A module is deemed completed when all requirements have been satisfactorily submitted on the learning management platform and ratified by a supervisor.

The Diploma is awarded when all modules have been satisfactorily completed and the trainee has passed a final examination, which will be administered by the Saudi Commission for Health Specialties.

The SPD in Paediatrics consists of the following modules:

1. Principles of Paediatrics including child safeguarding
2. Paediatric Emergency Medicine
3. General Paediatrics – Acute & Inpatient
4. General Paediatrics - Outpatients
5. Child Development and Behaviour
6. Neonatology
7. Respiratory and ENT
8. Cardiology
9. Gastroenterology, Hepatology & Nutrition

10. Neurology and Neurodisability
11. Infectious Diseases
12. Allergy and Immunology
13. Nephrology and Urology
14. Diabetes, Endocrinology and Metabolic Disorders
15. Genetics and Dysmorphology
16. Haematology and Oncology
17. Musculoskeletal and Rheumatology
18. Paediatric Intensive Care
19. Child and Adolescent Mental Health

6.1 I Indicative Allocation of Hours Per Module

The timelines are outlined for **guidance only**.

Most modules have been scheduled for 4 to 6 weeks, with a few exceptions. Trainees will be expected to undertake independent study in each of the areas listed, in parallel to their workplace learning. Each trainee will be assigned a supervisor, who will help guide and support them, monitoring their movement through the modules as well as their completion of the various evaluation activities. On the whole, progress through the modules will be driven by the trainees themselves.

In addition to their normal working hours, trainees will be expected to spend a minimum of four hours per week on self-directed learning resources (elearning modules, reading & research), 1-2 hours a week on case reports or preparing for other practical evaluations and 1-2 hours every two weeks attending a tutorial/small group session with their supervisor.

The work per module is broken down as follows:

Module	Teaching and Learning Approach							Assessment		
	Workplace Experience	eLearning, Reading, Journal Club	Game Scenario	Case Report w/ Reflection	Discussion Forum	Crash Course	Simulation Sessions	DOPS	Mini-CEX	Log Self-Study & Research
Principles of Paediatrics	✓	✓	–	1	✓	–	–	–	3	–
Paediatric Emergency Medicine	✓	✓	–	3	✓	PALS	✓	5	3	✓
General Paediatrics – Acute & InPatient	✓	✓	–	3	✓	–	–	–	3	✓
General Paediatrics – Outpatients	✓	✓	–	3	✓	–	–	–	1	✓
Child Development and Behaviour	✓	✓	–	2	✓	–	–	–	1	✓
Neonatology	✓	✓	–	3	✓	NRP	✓	6	1	✓
Respiratory and ENT	✓	✓	–	3	✓	–	✓	2	3	✓
Cardiology	✓	✓	–	2	✓	–	–	1	1	✓
Gastroenterology, Hepatology & Nutrition	✓	✓	–	2	✓	–	–	–	2	✓
Neurology and Neurodisability	✓	✓	–	2	✓	–	–	–	2	✓
Infectious Diseases	✓	✓	–	3	✓	–	–	1	2	✓
Allergy and Immunology	✓	✓	–	1	✓	–	–	–	–	✓
Nephrology and Urology	✓	✓	–	2	✓	–	–	–	1	✓
Diabetis, Endocrinology, Metabolic	✓	✓	–	2	✓	–	–	–	–	✓
Genetics and Dysmorpology	✓	✓	–	–	✓	–	–	–	–	✓
Haematology and Oncology	✓	✓	–	3	✓	–	–	–	2	✓
Musculoskeletan and Rheumatology	✓	✓	–	2	✓	–	–	–	1	✓
Paediatric Intensive Care	✓	✓	–	1	✓	PALS	–	5	–	✓
Child and Adolescent Mental Health	✓	✓	–	2	✓	–	–	–	–	✓

6.2 Sample Academic Calendar 2019/2020

The academic calendar below is illustrative and shows how a trainee might go through the modules and rotations, it also allows for a four-week vacation during each year. The timing of the rotations will need to be established for each cohort of trainees but in theory the trainees can achieve the modules in any sequence, although having a group of trainees follow the same sequence could be more beneficial for information sharing and supervision.

Modules - Year 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
Principles of Paediatrics																																																				
Paediatric Emergency Medicine																																																				
General Paediatrics - Acute & InPatient																																																				
General Paediatrics - Outpatients																																																				
Annual Leave																																																				
Neonatology																																																				
Rotation in NICU																																																				
Child Development and Behaviour																																																				
Respiratory and ENT																																																				
Cardiology																																																				
Gastroenterology, Hepatology & Nutrition																																																				
Rotation in Community Paediatrics																																																				
Modules - Year 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
Neurology and Neurodisability																																																				
Infectious Diseases																																																				
Allergy and Immunology																																																				
Nephrology and Urology																																																				
Diabetes, Endocrinology, Metabolic																																																				
Annual Leave																																																				
Genetics and Dysmorphology																																																				
Haematology and Oncology																																																				
Rotation in Paediatric EM																																																				
Musculoskeletal and Rheumatology																																																				
Paediatric Intensive Care																																																				
Child and Adolescent Mental Health																																																				
Final Exam Preparation and Exam																																																				

7. Teaching and Learning Strategy

The teaching and learning strategies identified for this diploma will take into account that the trainees will be adult learners with different learning styles. They will also be working full-time in a Paediatric Department and progress through the modules will be largely self-directed.

Instructional material will summarize key required knowledge of each topic and will reference additional sources of information for further reading by trainees (such as guidelines, standards, videos). A range of methodologies are employed in the delivery of this program.

Trainees will also be required to obtain direct observational and clinical feedback through the use of standard evaluations such as the DOPs and Mini-CEX forms. These forms will be available on the online learning platform.

Examples of teaching and learning modalities included in this program are:

- Self-directed independent work, including e-learning modules and assigned reading
- Work-based skills demonstrations/instruction tied to specific competencies (on the job training)
- Access to consultants in Paediatrics
- Completing Paediatric Advanced Life Support and Newborn Life Support courses
- Direct contact with supervisor via fortnightly tutorials and/or group discussions
- Supervised practice & evaluation throughout the program
- Discussion Forums – opportunity to interact with other trainees on the same program in the same or other hospitals. These forums will be moderated by supervisors.

7.1 Theoretical eLearning Content

eLearning and/or reference content will be provided for each module, directing trainees to key topics. Trainees will be expected to study the provided content themselves in a self-directed manner.

7.2 Tutorials & Group Discussions

Supervisor-led sessions will be held every two weeks to discuss the topics being covered, address trainee questions and share trainee and supervisor experiences/examples. Ideally the group of trainees undertaking the course will be convened in each facility. Trainees will participate in Journal Clubs in the hospital in which they are working.

7.3 Supervised Practice

Trainees will be assigned a supervisor to observe, evaluate and provide feedback on their clinical skills and procedures, as well as conduct periodic case-based discussions. Successful supervised practice sessions must be recorded and verified.

7.5 Hands-on Skills Courses

The following practical courses will be scheduled for trainees over the two years and are required to sit the final exam:

1. Paediatric Advanced Life Support (American Academy of Paediatrics)
2. Neonatal Resuscitation Program (NRP)
3. Paediatric and Neonatal Mechanical Ventilation
4. Practical Procedures - Skills (included with simulation courses)

7.6 Simulations

One simulation day per year will be provided focusing on the initial assessment and resuscitation of the seriously ill child, as well as practical procedures. Simulations will focus on clinical assessment and management as well as team management and communication.

8. Assessment Strategy

The assessment strategy will include both continuous and summative assessment. Each module and its associated competencies will be assessed during the diploma, followed by a formal exam, administered by the SCFHS, at the end of the diploma.

8.1 Continuous Assessment & Evaluation

Continuous Assessment & Evaluation will measure both knowledge attainment and achievement of clinical competency through a variety of different methods.

Tool	What is assessed	Methodology	Requirement
Mini-CEX	History taking, patient examination, diagnosis and management.	Short clinical encounters observed by a supervisor. Supervisors must complete the online evaluation form for each observed encounter.	For each topic outlined in the curriculum, one mini-CEX indicating the requisite understanding must be submitted.
Directly Observed Procedural Skills (DOPS)	Ability to safely and appropriately carry out specific procedures.	DOPs evaluation form to be completed online by a supervisor for each procedure observed.	For each procedure outlined in the schedule, one DOP indicating satisfactory performance of the skill must be submitted. The minimum list of procedures requiring a DOPs is called out below.

Tool	What is assessed	Methodology	Requirement
Structured case report	Clinical approach across a wide variety of conditions, with an emphasis on learning points.	A structured written report of no more than 1000 words about a particular clinical case which includes trainee reflection on particular learning points or lessons from the case followed by one to one discussion with the supervisor.	Requirements vary across the modules, but typically two to three case reports per module.
End of Module Quiz	Knowledge of topic area.	Online quiz administered at the end of each eLearning module (or group of modules).	Must achieve a minimum of 80% to pass.

Note: the portfolio has not been listed as a separate item above as it is representing the collection of all activities completed via the online learning platform.

These assessment methods are linked to the curriculum and are based on the assumption that each trainee is working in an Paediatrics while he/she is undertaking this program. These types of assessment generally require trainees to apply what they have learned in the specific context of the unit in which they are working.

The performance of the trainee is assessed by a designated clinical supervisor. The supervisor must certify/sign off all practical trainee activities by completing the appropriate evaluation and providing feedback to the trainee on the online learning platform. The trainee should also receive verbal feedback on their performance throughout the program.

Performance assessment provides valuable insight into trainee learning and provides trainees with comprehensive information on improving their skills and the opportunity for trainee's self-assessment and motivation is increased. Performance assessment can be directly linked to both program and module learning outcomes.

8.1.1 Summary of Directly Observed Procedural Skills (DOPS) Evaluations Required

The following table summarises the list of procedures that require a DOPS evaluation during the two years. The trainee should be competent to perform the procedure unsupervised.

DOPS can be signed off at any point during the diploma. The modules, during which some procedures are best suited to being assessed, are highlighted below. DOPS may also be evaluated during simulation training and do not always map to a single module.

Suggested modules in which procedure could be evaluated	Directly Observed Procedural Skill (DOPS)
Paediatric Emergency Medicine, Paediatric Intensive Care	Bag, mask, valve ventilation and CPR
	Endotracheal intubation of the child
	Needle thoracocentesis for pneumothorax
	Insertion of intraosseous needle
	Suturing
	Collection of blood from central lines
Neonatology	Umbilical artery catheterisation
	Intubation of term newborn infant
	Intubation of pre-term infant
	Umbilical venous catheterisation
	Capillary blood sampling
	Administration of surfactant
Cardiology	Record a 12-lead electrocardiogram in a child
Respiratory	Interpret peak flow meter results
	Teach inhaler technique to a child
All (particularly in the context of well-baby clinic)	Administer intradermal injection Administer subcutaneous injection Administer intramuscular injection
All	Peripheral venous cannulation
All	Lumbar puncture
All	Non-invasive blood pressure measurement
All	Suprapubic aspiration of urine
All	Urethral catheterisation

8.1.2 Summary of Workplace Assessments Required

The following table summarises the various evaluations required during the two years. Evidence of these evaluations must be recorded on the online learning platform.

Module	Mini-CEX	DOPS	Case report
Principles of Paediatrics	3		1 (SAFEGUARDING)
Paediatric Emergency Medicine	3		3
General Paediatrics – Acute & Inpatient	3		3
General Paediatrics – Outpatient	1		3
Child Development & Behaviour	1		2
Neonatology	1		3
Respiratory and ENT	3		3
Cardiology	1		2
Gastroenterology, Hepatology & Nutrition	2		2

Module	Mini-CEX	DOPS	Case report
Neurology and Neurodisability	2		2
Infectious Diseases	2		3
Immunology and Allergy	0		1
Nephrology and Urology	1		2
Diabetes, Endocrinology and Metabolic Disorders	0		2
Genetics and Dysmorphology	0		0
Haematology and Oncology	2		3
Musculoskeletal and Rheumatology	1		2
Paediatric Intensive Care	0		1
Child and Adolescent Mental Health	0		2
Total	26	24 (see section 8.1.1)	40

8.2 Periodic Evaluation with Supervisor

Supervisors are required to complete a Summary Evaluation Report for their trainees on a regular basis. This report should include the below and should be discussed in person with the trainee.

- Review of Mini-CEX, DOPs & Cases completed during the period
- Review of elearning modules completed
- Review of feedback provided and attainment of 'learning/skills mastery'
- Highlighting areas of concern or areas of priority for the trainee in the next period

Tool	What is assessed	Methodology	Requirement
Summary Report	Overall competence in the clinical setting as well a review of the required program activities.	Report to be completed online by supervisor.	To be completed by a supervisor every month for first six months and every 3 months thereafter.

8.3 Summative Assessment

The SCFHS will administer an unseen examination at the end of the two years, which will consist of a written exam in the form of MCQs and also a number of OSCEs to demonstrate clinical expertise.

Tool	What is assessed	Methodology
MCQ Examination	Knowledge of key topic areas.	Formal supervised written exam administered by the SCFHS (200 – 300 questions, announced 3 months prior to exam).

Tool	What is assessed	Methodology
OSCE	Clinical skill performance and competence.	Will consist of a Practical Objective Structured Clinical Examination (OSCE) of 5-15 minutes each, in the form of 8 – 12 Stations.

OSCE Examination

An OSCE usually comprises a circuit of short (the usual is 5–15 minutes) stations, in which each trainee is examined on a one-to-one basis with one or two impartial examiner(s) and either real or simulated patients. Each station has a different examiner. Trainees rotate through the stations, completing all the stations on their circuit. In this way, all trainees take the same stations.

An OSCE is designed to be *objective* – all trainees are assessed using exactly the same stations with the same marking scheme. The OSCE is carefully structured to include parts from all elements of the curriculum as well as a wide range of skills.

It is designed to apply clinical and theoretical knowledge. Where theoretical knowledge is required, for example, answering questions from the examiner at the end of the station, then the questions are standardized and the candidate is only asked questions that are on the mark sheet.

8.3 Grading Scheme

Although all assessment activity is not part of the final grade, these activities are still mandatory and must be completed in order to successfully complete the program.

Assessment Activity	Requirement	% of Final Grade
Mini-CEX	Mandatory.	N/A
Direct Observation of Procedural Skills (DOPS)	Mandatory. For each procedure outlined in the schedule, one DOP indicating satisfactory performance of the skill must be submitted.	N/A
Case-based Discussion	Mandatory. Requirements vary across the modules, but typically three case reports per module.	N/A
End of Module Quiz	Mandatory. Must pass (80%) every one of the elearning modules in the program.	N/A
Periodic Evaluation by Supervisor	Mandatory. To be completed by a supervisor every month for first six months and every 3 months thereafter.	N/A

Assessment Activity	Requirement	% of Final Grade
Final Exam	Pass/Fail scenario – passing grade 60%	60%
OSCE	Pass/Fail scenario – passing grade determined for each OSCE based on minimal performance level (MPL), e.g. Failing of 3 stations (if up to 10) = failure Failure of 4 stations = fail if 11 or 12 stations	MPL

Trainees must pass each of the elements above independently and no single element can be skipped or failed. The final award will be based on achieving a total minimum grade of 60% (combination of Final Exam and OSCE).

8.4 Award

On successful completion of all elements of the diploma, including continuous assessment and summative assessment, trainees will receive the SPD in Paediatrics from the SCFHS in recognition of their achievement.

Following successful completion of the program, graduates will be required to:

- register as an affiliate member in the SPD program, one-year post graduation, with the year spent in the same core specialty department.
- trainees will be entitled to the Registrar title when they have completed an additional two-years of experience in an Paediatrics Department.

9. Program Management

The program will have a Program Director who will coordinate with each healthcare facility and Supervisors in which there are trainees.

All day-to-day program management will follow existing SCFHS procedures, policies and guidelines.

10. Resources

Facilities: Library, Skills laboratory/Simulation Lab, Lecture room (for Crash Courses)
Equipment: Simulator Mannequins.

11. Quality Assurance

Quality assurance is an essential part of best practice. In terms of healthcare delivery an effective program demonstrates a mark of quality and quality assurance. All quality assurance activities prescribed by the SCFHS policies and procedures should be adhered to in the delivery of this diploma.

12. Modules

12.1 Principles of Paediatrics, including child safeguarding

Brief Description

This module outlines the core principles of providing good clinical care in Paediatrics. On completion of this module, trainees will be familiar with the generic competencies that relate to clinical practice in Paediatrics. These include history and examination of the child, effective communication with children and their families, and the principles of prescribing medicines for babies and children. Trainees will be expected to take part in local clinical governance processes, including evidence based practice and audit. Trainees will also learn about the different categories of child abuse, and familiarize themselves with the concepts and factors underpinning child protection work.

Learning Outcomes

Following this module, the trainee should be able to:

1. Outline the key features of a Paediatric history in different age groups.
2. Use effective communication techniques with children and their parents to take an age-appropriate history.
3. Demonstrate accurate examination of children and babies in appropriate settings.
4. Document their findings in an accurate, logical and legible medical record.
5. Safely prescribe medicines according to the child's weight or age.
6. Make the mathematical calculations required for drug and fluid prescriptions.
7. Know the principles of newborn screening and immunization programs in childhood in Saudi Arabia.
8. Describe the different categories of child abuse and how they may present to healthcare professionals
9. List the characteristics of the history and examination that should trigger concern about the possibility of child abuse eg. Inconsistent history, injuries not in keeping with mechanism of injury.
10. Be able to use body charts to document the results of the examination of a baby, child or adolescent.

Topics

Topics included in this module are:

- History taking including birth history and developmental history
- Examination of the child and newborn
- Drug prescribing
- Screening programs (National Newborn Screen Program (NBS) under process in Saudi Arabia)
- Immunization schedule in Saudi Arabia
- Immunization indications, contraindications and complications
- Categories of child abuse: Physical abuse, Emotional abuse, Sexual abuse, Neglect, Fabrication or induced illness of the child

Specific Skills / Competencies

- History and examination of the child

Teaching and Learning Approach

- Workplace experience (all rotations)
- Journal clubs and audit
- eLearning
- Mini CEX
- Discussion forum

Assessment Methods

To determine that the trainee has reached the standards of knowledge, skill and competence identified in the learning outcomes, trainees are required to complete the following continuous assessment activities for this module:

- Log evidence of self-study and research undertaken
- Evidence of completion of eLearning modules
- Mini CEX for each of the following (can be combined with a mini-CEX from separate modules):
 - Drug prescription
 - Intravenous fluid prescription
 - Child Safeguarding Case
- Structured case report of ONE safeguarding case including assessment of record keeping

Indicative Self-Directed Resources

To be added as each module is developed.

- <https://www.moh.gov.sa/HealthAwareness/EducationalContent/HealthTips/Documents/تامي عطت ال20% لودج.pdf>

12.2 Paediatric Emergency Medicine

Brief Description

This module focuses on the care of the child in respiratory or cardiac arrest, as well as common Paediatric emergencies. On completion of this module, trainees will know and follow the internationally recognized algorithms for Paediatric life support. They will be able to lead a team in the resuscitation of children, and be part of the escalation process to Paediatric intensive care. This module also focuses on recognizing some of the cardinal features of the deteriorating child.

Newborn life support is covered in the Neonatology module.

Learning Outcomes

Following this module, the trainee should be able to:

1. Perform an initial assessment of a child with serious illness or injury.
2. Follow the PALS algorithm to manage the child in cardio-respiratory arrest.
3. Recognise the key features of a child at risk of deterioration.
4. Use an SBAR (situation, background, assessment, recommendation) format to refer children in need of transfer to intensive care.
5. Recognise and commence initial management for common Paediatric emergencies
6. Assess an injured child and initiate appropriate investigations and treatment
7. Outline the general approach to poisoning and envenomation.
8. Outline management of specific poisons e.g. paracetamol overdose

Topics

- Basic Life Support
- Advanced Life Support
- Choking with Airway obstruction
- Peri-arrest rhythms
- Recognition of deteriorating child & Paediatric Early Warning Scores (PEWS)
- SBAR handover
- Anaphylaxis
- Brief, Resolved, Unexplained Events (BRUEs)
- Cyanotic baby
- Decreased level of consciousness
- Febrile neutropaenia
- Poisoning
- Bronchial asthma and status asthmaticus
- Seizures/status epilepticus
- Sepsis
- Dehydration and Shock
- Swallowed Foreign Body
- Diabetic ketoacidosis
- Acute red eye

- Trauma/Injury
 - Upper and lower limb injury
 - Fracture
 - Salter Harris classification
 - Soft tissue injury
 - Joint injury and dislocation
 - Wounds
 - Burns
 - Head injury
 - Non accidental injury – physical, sexual, neglect
 - Pulled elbow

Specific Skills / Competencies

- Airway management skills
- Administer oxygen therapy using a variety of devices
- Cardiopulmonary resuscitation
- Peripheral/central venous cannulation
- Intraosseous needle insertion
- Needle thoracocentesis
- Nasogastric tube insertion and placement confirmation
- Interpretation of trauma x-rays in the skeletally immature patient
- Suturing

Teaching and Learning Approach

- PALS course
- Simulation
- Workplace experience (Children's ED, general paediatrics, PICU)
- Structured case reports and reflective learning
- eLearning
- DOPS/Mini CEX
- Discussion forum

Assessment Methods

To determine that the trainee has reached the standards of knowledge, skill and competence identified in the learning outcomes, trainees are required to complete the following continuous assessment activities for this module:

- Completion of PALS course
- Log evidence of attendance at Paediatric resuscitations with evidence of reflective learning
- Evidence of completion of eLearning modules
- Completion of the requisite Simulation activities

- Completion of Directly Observed Procedural Skill (DOPS) evaluation forms indicating satisfactory competence for each of the following skills/procedures¹:
 - Bag valve mask ventilation & CPR
 - Endotracheal intubation of the child
 - Needle thoracocentesis for pneumothorax
 - Intraosseous needle insertion
 - Suturing
- Completion of a mini-CEX for each of the following scenarios
 - Paediatric resuscitation of seriously ill child
 - Head Injury
 - Burns
- Structured case report with reflective element for any THREE of the topics outlined above
 - OSCE assessment of Paediatric Basic Life Support

Indicative Self-Directed Resources

To be added as each module is developed.

12.3 General Paediatrics – Acute & Inpatient

Brief Description

This module focuses on the care of the acutely unwell child. Trainees will learn how to assess and effectively manage the common conditions that children can present to hospital with. They will understand the potentially life threatening nature of some of these conditions and when to ask for help.

Learning Outcomes

Following this module, the trainee should be able to:

1. Assess and instigate initial management plans for children presenting to outpatients with the common conditions listed below.
2. Work within a multidisciplinary team to provide ongoing care for these children in an inpatient setting.
3. Provide appropriate discharge planning and advice for children and their families.

Topics

Topics included in this module are:

- Acute asthma/Viral induced wheeze
- Bronchiolitis
- Fever
- Gastroenteritis
- Meningitis, viral and bacterial
- Neonatal jaundice and cholestasis

¹The DOPS may be completed in the context of another module, i.e., when the opportunity arises. Also, although there are 6 separate DOPS listed above the procedures may all be performed as part of a single clinical event. Equally, it may be necessary to evaluate through simulation.

- Periorbital/orbital cellulitis
- Pneumonia
- Seizures (febrile and afebrile)
- Sepsis
- Sick cell crisis
- Urinary Tract Infection

Specific Skills / Competencies

- Interpretation of urine dipstick
- ECG interpretation
- Teach inhaler technique to a child
- Peripheral venous cannulation/venesection

Teaching and Learning Approach

- Workplace experience (general paediatrics, ED)
- eLearning
- Mini-Cex
- Case studies with reflection
- Discussion forum

Assessment Methods

To determine that the trainee has reached the standards of knowledge, skill and competence identified in the learning outcomes, trainees are required to complete the following continuous assessment activities for this module:

- Log evidence of self-study and research undertaken
- Evidence of completion of eLearning modules
- Completion of a mini-CEX for each of the following scenarios
 - Asthma/Viral wheeze
 - Fever/Sepsis
 - Gastroenteritis with severe dehydration
- Structured case report with reflective element for any THREE of the topics outlined above

Indicative Self-Directed Resources

To be added as each module is developed.

12.4 General Paediatrics – Outpatient

Brief Description

This module focuses on care of infants and children who have been referred to the paediatric outpatient department. On completion of the module, trainees will have the knowledge and skills to be able to assess and initiate management of children presenting with common outpatient conditions. They will understand the potentially life threatening nature of some of these conditions and when to ask for help.

Learning Outcomes

Following this module, the trainee should be able to:

1. Recognise, investigate, initiate and continue the management of the common chronic health problems presenting to paediatric outpatient clinics, drawing upon the expertise of other specialists as necessary.
2. Be able to measure children accurately and to assess their growth using CDC growth charts, taking into account parental stature and pubertal status.

Topics

Topics included in this module are:

- Anaemia
- Constipation
- Eczema/rashes
- Failure to thrive
- Headache
- Heart murmur
- Recurrent abdominal pain
- Recurrent cough/wheeze
- Rickets/vitamin D deficiency
- Short/Tall stature
- Sickle cell disease
- Squint
- Vaccinations
- Well baby check up

Specific Skills / Competencies

- Plot and interpret child's weight, head circumference and length/height on CDC growth charts

Teaching and Learning Approach

- Workplace experience (general paediatrics, outpatients, Well baby clinic)
- eLearning
- Case studies with reflection
- Discussion forum

Assessment Methods

To determine that the trainee has reached the standards of knowledge, skill and competence identified in the learning outcomes, trainees are required to complete the following continuous assessment activities for this module:

- Log evidence of self-study and research undertaken
- Evidence of completion of eLearning modules
- Completion of one mini-CEX for the following scenario
 - Failure to Thrive
- Structured case report with reflective element for any THREE of the topics outlined above

Indicative Self-Directed Resources

To be added as each module is developed.

12.5 Child Development and Behaviour

Brief Description

This module focuses on the assessment and understanding of the childhood physical, cognitive and social development. Trainees will learn about expected developmental milestones, how to perform an assessment and when to refer in patients with developmental delay. In addition, the module will look at the management of common behavioural problems in childhood.

Learning Outcomes

Following this module, the trainee should be able to:

1. List the major expected developmental milestones in the four categories of child development.
2. Use appropriate screening tools to perform a basic developmental assessment.
3. Identify the 'red flag' age for referral for children who are not achieving their milestones.
4. Know the principles of managing common behaviour problems.

Topics

Topics included in this module are:

- Developmental milestones in four categories: gross motor, fine motor and vision, speech and hearing, social
- 'Red-flag' age limits in developmental assessment
- Developmental screening tools e.g. Denver
- Differential diagnosis associated with disordered development
- Speech and language delay including hearing loss
- Developmental regression
- Common behavioural problems eg. temper tantrums, sleep problems, the crying baby, feeding difficulties, oppositional behaviour, enuresis and encopresis, school refusal.

Specific Skills / Competencies

- Proficiency in the use of developmental assessment tools for young children

Teaching and Learning Approach

- Workplace experience (community and primary care paediatrics)
- eLearning
- mini-CEX
- Case studies
- Discussion forums

Assessment Methods

To determine that the trainee has reached the standards of knowledge, skill and competence identified in the learning outcomes, trainees are required to complete the following continuous assessment activities for this module:

- Log evidence of self-study and research undertaken
- Evidence of completion of eLearning modules
- Completion of one mini-CEX for the following scenarios
 - Child development assessment
- Structured case report with reflective element for any TWO of the topics outlined above

Indicative Self-Directed Resources

To be added as each module is developed.

12.6 Neonatology

Brief Description

This module focuses on the care of the unwell newborn infant. It will guide trainees through some of the generic competencies required to care for neonates, as well as focus on the common conditions that require admission to the neonatal unit and postnatal wards. Trainees will need to complete the newborn life support course, and will learn to perform some of the key procedures that are undertaken in the neonatal unit.

Learning Outcomes

Following this module, the trainee should be able to:

1. Examine and assess the newborn baby and instigate resuscitation where required.
2. Describe the main complications of prematurity and their management.
3. Recognise and outline the management of common and potentially serious complications of the term newborn infant.
4. Understand the principles of prescribing for newborn infants and breastfeeding mothers.
5. Perform procedures that are required in the care of the sick infant.
6. Be able to describe the ethical principles relating to neonatal intensive care.

Topics

Topics included in this module are:

- Neonatal Intensive Care
 - Prematurity
 - Birth Depression
 - Respiratory distress syndrome
 - Cyanosis
 - Intrauterine Growth Restriction and Nutrition
 - Hypotension
 - Fluid and blood therapy
 - Seizures
 - Sepsis
 - Congenital abnormalities
 - Surgical problems
 - The dying baby
- Postnatal ward & Well baby clinic
 - Newborn skin lesions
 - Jaundice (early and prolonged)

- Feeding problems
- Infant of diabetic mothers
- Congenital abnormalities including absent red reflex
- Vaccinations
- Follow up of nutritional status, growth and development
- Newborn screening tests e.g. hypothyroidism

Specific Skills / Competencies

- Bag, valve mask ventilation
- Chest compressions
- Intubation of term and preterm baby
- Venesection and capillary blood sampling
- Peripheral venous cannulation
- Umbilical venous catheterisation
- Umbilical arterial catheterisation
- Administration of Surfactant

Teaching and Learning Approach

- Neonatal Resuscitation Program (NRP)
- Workplace experience (NICU, well baby clinic)
- DOPS and mini-CEX
- eLearning
- Case studies with reflection
- Discussion forum

Assessment Methods

To determine that the trainee has reached the standards of knowledge, skill and competence identified in the learning outcomes, trainees are required to complete the following continuous assessment activities for this module:

- Satisfactory completion of Neonatal Resuscitation Program (NRP)
- Log evidence of self-study and research undertaken
- Evidence of completion of eLearning modules
- Completion of Directly Observed Procedural Skill (DOPS) evaluation forms indicating satisfactory competence for each of the following skills/procedures²:
 - Intubation of the newborn infant
 - Intubation of the preterm infant
 - Capillary blood sampling
 - Administration of surfactant
 - Umbilical venous catheterisation
 - Umbilical artery catheterisation

² The DOPS may be completed in the context of another module, i.e., when the opportunity arises. Also, although there are 4 separate DOPS listed above the procedures may all be performed as part of a single clinical event. Equally, it may be necessary to evaluate through simulation.

- Completion of one mini-CEX for the following scenario
 - Newborn resuscitation
 - Structured case report with reflective element for any THREE of the topics outlined above

Indicative Self-Directed Resources

To be added as each module is developed.

12.7 Respiratory and ENT

Brief Description

This module focuses on care of children with respiratory and ear, nose and throat disorders. On completion of the module, trainees will have the knowledge and skills to be able to assess and initiate management of patients presenting with respiratory problems in acute and outpatient settings. They will understand the potentially life threatening nature of some of these conditions and when to ask for help.

Learning Outcomes

Following this module, the trainee should be able to:

1. Assess a child presenting with a respiratory or ENT illness
2. Formulate a plan to establish the diagnosis including consideration of differential diagnoses
3. Recognise factors that represent underlying or serious pathologies
4. Initiate appropriate management, including relevant investigations and treatment
5. Demonstrate effective communication with children and their families, especially with regards to adherence to treatment eg. preventative therapies for asthma, inhaler technique

Topics

Topics included in this module are:

- Acute Presentations
 - Earache
 - Epistaxis
 - Upper respiratory Tract Infection
 - Stridor
 - Croup
 - Epiglottitis
 - Tracheitis
 - Foreign body
 - Wheeze
 - Asthma
 - Viral induced wheeze
 - Bronchiolitis
 - Lower Respiratory Tract Infection
 - Respiratory failure

- Outpatient Presentations
 - Cervical Lymphadenopathy
 - Recurrent Cough/Wheeze
 - Asthma
 - Snoring/obstructive sleep apnoea
 - Tuberculosis
 - Cystic Fibrosis

Specific Skills / Competencies

- Teach inhaler technique to a child
- Perform basic lung function tests

Teaching and Learning Approach

- Workplace experience (general paediatrics, ED, outpatients, subspecialty)
- eLearning
- Practical procedures covered in simulation session
- Case studies with reflection
- Discussion forum

Assessment Methods

To determine that the trainee has reached the standards of knowledge, skill and competence identified in the learning outcomes, trainees are required to complete the following continuous assessment activities for this module:

- Log evidence of self-study and research undertaken
- Evidence of completion of eLearning modules
- Completion of Directly Observed Procedural Skill (DOPS) evaluation forms indicating satisfactory competence for each of the following skills/procedures:
 - Interpret peak flow meter result
 - Teach inhaler technique to a child
- Structured case report with reflective element for any THREE of the topics outlined above
- Completion of a mini-CEX for each of the following scenarios?
 - Acute asthma
 - Chronic asthma
 - Bronchiolitis

Indicative Self-Directed Resources

To be added as each module is developed.

12.8 Cardiology

Brief Description

This module focuses on care of infants and children with cardiac disorders. On completion of the module, trainees will have the knowledge and skills to be able to assess and initiate management of patients presenting with cardiac problems in acute and outpatient settings.

They will understand the potentially life threatening nature of some of these conditions and when to ask for help.

Learning Outcomes

Following this module, the trainee should be able to:

1. Recognise how congenital heart disease can present both acutely and as an outpatient
2. Assess a child presenting with a suspected cardiac condition
3. Formulate a plan to establish the diagnosis including consideration of differential diagnoses
4. Recognise factors that represent underlying or serious pathologies, and the importance of early intervention and specialist review e.g. duct dependent congenital heart disease
5. Demonstrates knowledge of the cardiac associations and sequelae which may require specialist assessment (e.g. Trisomy 21, 22q11 deletion syndrome)
6. Initiate appropriate management, including relevant investigations and treatment
7. Respond appropriately to cardiac arrest and peri-arrest rhythms
8. Be able to identify common ECG rhythms
9. Distinguish features of murmurs and heart sounds, and how these relate to cardiac pathologies.

Topics

Topics included in this module are:

- Foetal circulation and circulatory changes at birth
- Acute Presentations
 - Cyanosis
 - Heart failure (non-cyanotic congenital heart disease)
 - Arrhythmias
 - Infective endocarditis
 - Rheumatic fever
 - Kawasaki's disease
- Outpatient Presentations
 - Heart murmur
 - Palpitations
 - Syncope
 - Hypertension

Specific Skills / Competencies

- ECG recording and interpretation
- BP measurement
- Defibrillation and cardioversion

Teaching and Learning Approach

- Workplace experience (general paediatrics, NICU, ED, outpatients, subspecialty)
- eLearning
- Case studies with reflection
- Discussion forum
- Courses for ECG interpretation

Assessment Methods

To determine that the trainee has reached the standards of knowledge, skill and competence identified in the learning outcomes, trainees are required to complete the following continuous assessment activities for this module:

- Log evidence of self-study and research undertaken
- Evidence of completion of eLearning modules
- Completion of Directly Observed Procedural Skill (DOPS) evaluation forms indicating satisfactory competence for each of the following skills/procedures:
 - Record a 12-lead ECG in a child or infant
- Structured case report with reflective element for any TWO of the topics outlined above
- Completion of one mini-CEX for the following scenario
 - Congenital heart disease

Indicative Self-Directed Resources

To be added as each module is developed.

12.9 Gastroenterology, Hepatology and Nutrition

Brief Description

This module focuses on care of infants and children with gastrointestinal, liver or nutritional illness. On completion of the module, trainees will have the knowledge and skills to be able to assess and initiate management of patients presenting with gastrointestinal problems in acute and outpatient settings. They will understand the potentially life threatening nature of some of these conditions and when to ask for help.

Learning Outcomes

Following this module, the trainee should be able to:

1. Assess a child presenting with a suspected gastrointestinal, liver or nutritional disorder
2. Formulate a plan to establish the diagnosis including consideration of differential diagnoses
3. Recognise factors that represent underlying or serious pathologies, including recognizing when a surgical opinion is required
4. Initiate appropriate management, including relevant investigations and treatment
5. Understand the role of endoscopy in the investigation of gastrointestinal disorders
6. Recognizes, investigates and manages the common causes of malabsorption and malnutrition and their consequences (e.g. iron, zinc and vitamin deficiencies)
7. Outline the pathways for vitamin D metabolism and how this relates to the aetiology of rickets

Topics

Topics included in this module are:

- Acute Presentations
 - Acute abdominal pain
 - Diarrhoea/vomiting
 - Upper and Lower GI bleeding

- Jaundice and cholestasis
- Acute Liver Failure
- Malnutrition
- Outpatient Presentations
 - Chronic abdominal pain
 - Chronic diarrhoea/vomiting
 - Constipation
 - Dysphagia
 - Malabsorption
 - Jaundice and cholestasis
 - Faltering weight (failure to thrive)
 - Obesity
 - Rickets

Teaching and Learning Approach

- Workplace experience (general paediatrics, ED, outpatients, subspecialty)
- eLearning
- Case studies with reflection
- Discussion forum

Assessment Methods

To determine that the trainee has reached the standards of knowledge, skill and competence identified in the learning outcomes, trainees are required to complete the following continuous assessment activities for this module:

- Log evidence of self-study and research undertaken
- Evidence of completion of eLearning modules
- Structured case report with reflective element for any TWO of the topics outlined above
- Completion of a mini-CEX for each of the following scenarios
 - Abdominal pain
 - Rickets

Indicative Self-Directed Resources

To be added as each module is developed.

12.10 Neurology and Neurodisability

Brief Description

This module focuses on care of infants and children with neurological disorders and neurodisability. On completion of the module, trainees will have the knowledge and skills to be able to assess and initiate management of patients presenting with neurological problems in acute and outpatient settings. They will understand the potentially life threatening nature of some of these conditions and when to ask for help. Trainees will work with multidisciplinary teams and adopt a holistic approach to the child with complex neurodisability.

Learning Outcomes

Following this module, the trainee should be able to:

1. Assess a child presenting with a suspected neurological disorder
2. Examine the nervous system of a newborn, child and young person
3. Formulate a plan to establish the diagnosis including consideration of differential diagnoses
4. Recognise factors that represent underlying or serious pathologies
5. Initiate appropriate management, including relevant investigations and treatment
6. Know about common causes of seizures and epileptic syndromes, and the principles of commencing anticonvulsant therapy
7. Understand the use and principles of neuroimaging and neurophysiological tests
8. Know and understand the common causes of disability, the impact disability can have on the child and their family, and what services are available to support them

Topics

Topics included in this module are:

- Trainee Presentations
 - Seizures
 - Headache
 - Faints and 'funny turns'
 - Bell's palsy/ptosis
 - Acute focal neurology
 - Meningism and altered conscious level
 - Fever or illness in a child with complex disabilities
 - Hydrocephalus
 - Blocked ventriculoperitoneal shunt.
 - Neural tube defect
- Outpatient Presentations
 - Epilepsy
 - Headache
 - Abnormal head shape
 - Weakness
 - Ataxia and abnormal movement patterns
 - Hypotonia, neuropathy and myopathy

Teaching and Learning Approach

- Workplace experience (general paediatrics, ED, outpatients, subspecialty)
- eLearning
- Case studies with reflection
- Discussion forum

Assessment Methods

To determine that the trainee has reached the standards of knowledge, skill and competence identified in the learning outcomes, trainees are required to complete the following continuous assessment activities for this module:

- Log evidence of self-study and research undertaken
- Evidence of completion of eLearning modules
- Structured case report with reflective element for any TWO of the topics outlined above
- Completion of a mini-CEX for each of the following scenarios
 - Seizures
 - Hypotonia

Indicative Self-Directed Resources

To be added as each module is developed.

12.11 Infectious Diseases

Brief Description

This module focuses on care of infants and children with infective disease. On completion of the module, trainees will have the knowledge and skills to be able to assess and initiate management of patients presenting with common infections in acute and outpatient settings. They will understand the potentially life threatening nature of some of these conditions and when to ask for help.

Learning Outcomes

Following this module, the trainee should be able to:

1. Assess a child presenting with a suspected infection
2. Formulate a plan to establish the diagnosis including consideration of differential diagnoses
3. Recognise factors that represent underlying or serious pathologies
4. Know the epidemiology, pathophysiology and natural history of common infections affecting the foetus, newborn, child and young person
5. Be aware of the policies for reporting notifiable diseases
6. Be able to follow local antibiotic policies and the importance of antibiotic stewardship

Topics

Topics included in this module are:

- Acute Presentations
 - Sepsis
 - Meningitis
 - Pyrexia of unknown origin
 - Specific bacterial infections, including meningococcal, pneumococcal, H. influenzae, streptococcal and staphylococcal infections
 - Viral illness and rash, including herpes simplex virus, chickenpox, Epstein-Barr virus, cytomegalovirus, parvovirus, human herpes virus, measles, mumps, rubella, enterovirus, Respiratory syncytial virus
 - Prolonged fever

Specific Skills / Competencies

- Lumbar Puncture
- Tuberculin skin testing
- Obtains appropriate microbiological samples eg. urine, sputum

Teaching and Learning Approach

- Workplace experience (general paediatrics, ED, subspecialty)
- eLearning
- Case studies with reflection
- Discussion forum

Assessment Methods

To determine that the trainee has reached the standards of knowledge, skill and competence identified in the learning outcomes, trainees are required to complete the following continuous assessment activities for this module:

- Log evidence of self-study and research undertaken
- Evidence of completion of eLearning modules
- Structured case report with reflective element for any THREE of the topics outlined above
- Completion of one Directly Observed Procedural Skill (DOPS) evaluation form indicating satisfactory competence for each of the following skills/procedures:
 - Lumbar puncture
- Completion of a mini-CEX for each of the following scenarios
 - Sepsis
 - PUO

Indicative Self-Directed Resources

To be added as each module is developed.

- Include list of notifiable infectious diseases and local policies around reporting these

12.12 Allergy and Immunology

Brief Description

This module focuses on care of infants and children with immunological or allergic disease. On completion of the module, trainees will have the knowledge and skills to be able to assess and initiate management of patients presenting with recurrent infections. They will understand the potentially life threatening nature of some of these conditions and when to ask for help.

Learning Outcomes

Following this module, the trainee should be able to:

1. Assess a child presenting with a suspected allergy or immunodeficiency
2. Formulate a plan to establish the diagnosis including consideration of differential diagnoses
3. Advise families on the appropriate use of adrenaline (Epipen) for anaphylactic reactions

Topics

Topics included in this module are:

- Anaphylaxis
- Infection in the immunocompromised child
- Recurrent infections
- Cow's milk protein allergy
- Food intolerance and other allergies

Teaching and Learning Approach

- Workplace experience (general paediatrics, ED, outpatients, subspecialty)
- eLearning
- Case studies with reflection
- Discussion forum

Assessment Methods

To determine that the trainee has reached the standards of knowledge, skill and competence identified in the learning outcomes, trainees are required to complete the following continuous assessment activities for this module:

- Log evidence of self-study and research undertaken
- Evidence of completion of eLearning modules
- Structured case report with reflective element for any ONE of the topics outlined above

Indicative Self-Directed Resources

To be added as each module is developed.

12.13 Nephrology and Urology

Brief Description

This module focuses on care of infants and children with renal and urinary tract disorders. On completion of the module, trainees will 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. They will understand the potentially life threatening nature of some of these conditions and when to ask for help.

Learning Outcomes

Following this module, the trainee should be able to:

1. Assess a child presenting with a suspected renal tract or urological disorder
2. Formulate a plan to establish the diagnosis including consideration of differential diagnoses
3. Recognise factors that represent underlying or serious pathologies, including recognizing when a surgical opinion is required
4. Initiate appropriate management, including relevant investigations and treatment
5. Understand the role of different renal imaging techniques including ultrasound, static and dynamic isotope scans in the investigation of urinary tract disorders

Topics

Topics included in this module are:

- Acute and chronic renal failure
- Nephrotic syndrome
- Acute nephritis
- Hypertension
- Urinary tract infection
- Acute scrotum pain/oedema
- Congenital renal & urogenital abnormalities
- Nephrolithiasis
- Voiding disorders including enuresis and dysuria
- Renal tubular disorders

Specific Skills / Competencies

- Undertake and interpret results of urinalysis
- BP measurement
- Urinary catheterisation in babies and children
- Suprapubic aspiration

Teaching and Learning Approach

- Workplace experience (general paediatrics, ED, outpatients, subspecialty)
- eLearning
- Case studies with reflection
- Discussion forum

Assessment Methods

To determine that the trainee has reached the standards of knowledge, skill and competence identified in the learning outcomes, trainees are required to complete the following continuous assessment activities for this module:

- Log evidence of self-study and research undertaken
- Evidence of completion of eLearning modules
- Structured case report with reflective element for any TWO of the topics outlined above
- Completion of one mini-CEX for the following scenario:
 - UTI

Indicative Self-Directed Resources

To be added as each module is developed.

12.14 Diabetes, Endocrinology and Metabolic Disorders

Brief Description

This module focuses on care of infants and children with diabetes and endocrine disorders. On completion of the module, trainees will have the knowledge and skills to be able to assess and initiate management of children presenting with diabetes and endocrine illness in acute and outpatient settings. They will understand the potentially life threatening nature of some of these conditions and when to ask for help.

Learning Outcomes

Following this module, the trainee should be able to:

1. Assess a child presenting with a suspected diabetes or endocrine disorder.
2. Formulate a plan to establish the diagnosis including consideration of differential diagnoses
3. Recognise factors that represent underlying or serious pathologies.
4. Initiate appropriate management, including relevant investigations and treatment
5. Manage children presenting with diabetic ketoacidosis safely using local guidance whilst demonstrating an awareness of potential complications such as cerebral oedema.
6. Be able to measure children accurately and to assess their growth using CDC growth charts, taking into account parental stature and pubertal status
7. Perform and understand results of dynamic endocrine tests
8. Know the common presenting complaints of metabolic conditions, including hypoglycaemia, encephalopathy, developmental regression, muscle weakness, organomegaly and faltering weight.
9. Outline the initial investigation and emergency management of a child with a suspected metabolic disorder, including referral for specialist input
10. Know the genetic inheritance patterns of common metabolic disorders

Topics

Topics included in this module are:

- Acute Presentations
 - Diabetic ketoacidosis
 - Non-ketotic presentations of diabetes
 - Hypoglycaemia
 - Ambiguous genitalia
 - Acid-base disturbance in metabolic disease
 - Hyperammonaemia
 - Congenital adrenal hyperplasia
- Outpatient Presentations
 - Short and tall stature
 - Delayed and early puberty
 - Thyroid disorders
 - Obesity
 - Diabetic complications

Specific Skills / Competencies

- Plot and interpret child's weight and length/height on CDC growth charts
- Undertake and interpret dynamic endocrine tests under guidance

Teaching and Learning Approach

- Workplace experience (general paediatrics, ED, outpatients, subspecialty)
- eLearning
- Case studies with reflection
- Discussion forum

Assessment Methods

To determine that the trainee has reached the standards of knowledge, skill and competence identified in the learning outcomes, trainees are required to complete the following continuous assessment activities for this module:

- Log evidence of self-study and research undertaken
- Evidence of completion of eLearning modules
- Structured case report with reflective element for any TWO of the topics outlined above

Indicative Self-Directed Resources

To be added as each module is developed.

12.15 Genetics and Dysmorphology

Brief Description

This module focuses on care of infants and children with genetic disorders. On completion of the module, trainees will have the knowledge and skills to be able to assess and initiate investigations of children presenting with genetic problems in outpatient settings, and when to ask for help.

Learning Outcomes

Following this module, the trainee should be able to:

1. Use structured approach to the assessment of a child with dysmorphic features
2. Formulate a plan to establish the diagnosis including consideration of differential diagnoses
3. Initiate appropriate management, including relevant investigations and treatment
4. Understand the scientific basis of chromosomal inheritance and identify the features of common chromosomal disorders
5. Recognise common dysmorphic syndromes and understand Saudi clinical variants

Topics

Topics included in this module are:

- Down's syndrome (Trisomy 21)
- Edward's syndrome (Trisomy 18)
- Patau's syndrome (Trisomy 13)
- Turner's syndrome

Teaching and Learning Approach

- Workplace experience (general paediatrics, NICU, outpatients, subspecialty)
- eLearning
- Case studies with reflection
- Discussion forum

Assessment Methods

To determine that the trainee has reached the standards of knowledge, skill and competence identified in the learning outcomes, trainees are required to complete the following continuous assessment activities for this module:

- Log evidence of self-study and research undertaken
- Evidence of completion of eLearning modules

Indicative Self-Directed Resources

To be added as each module is developed.

12.16 Haematology and Oncology

Brief Description

This module focuses on care of infants and children with haematological and oncology disorders. On completion of the module, trainees will have the knowledge and skills to be able to assess and initiate management of children presenting with haematology and oncology problems in acute and outpatient settings. They will understand the potentially life threatening nature of some of these conditions and when to ask for help. They will recognise the terminal prognosis for many of these conditions and the need to provide adequate symptom control and palliative care.

Learning Outcomes

Following this module, the trainee should be able to:

1. Assess a child presenting with haematology and oncology related disease
2. Formulate a plan to establish the diagnosis including consideration of differential diagnoses
3. Recognise factors that represent underlying or serious pathologies and when to refer to for specialist review
4. Initiate appropriate management, including relevant investigations and treatment
5. Recognise the common presentations suggestive of underlying malignancy
6. Know the basic principles and main side effects of cancer treatment
7. Be able to manage febrile neutropaenia, following local network guidelines and recognizing when to liaise with specialist services
8. Understand the indications and risks of administering blood products
9. Understand the genetics and pathophysiology of sickle cell disease, including Saudi genetic variants
10. Outline the acute and chronic complications of sickle cell disease and their management
11. Know about therapeutic options for symptom control
12. Recognise loss and grief and their effects on the health and well-being of children, families and professionals

Topics

Topics included in this module are:

- Acute & Outpatient Presentations
 - Sickle cell disease
 - Vaso-occlusive crisis
 - Chest crisis
 - Splenic sequestration
 - Stroke
 - Priapism
 - Bleeding/bruising/purpura
 - Leukaemia
 - Idiopathic thrombocytopenia
 - Henoch Schonlein Purpura
 - Haemophilia
 - Anaemia
 - Iron deficiency
 - Haemolytic anaemia
 - Thalassaemia
 - Complications of chemotherapy/radiotherapy/bone marrow transplant
 - Febrile neutropenia
 - Tumour lysis syndrome
 - SVC syndrome
 - Malignancy
 - Leukaemia
 - Lymphoma
 - Solid organ tumours
 - Pain and symptomatic relief e.g. nausea, vomiting and constipation

Teaching and Learning Approach

- Workplace experience (general paediatrics, ED, outpatients, subspecialty)
- eLearning
- Case studies with reflection
- Discussion forum

Assessment Methods

To determine that the trainee has reached the standards of knowledge, skill and competence identified in the learning outcomes, trainees are required to complete the following continuous assessment activities for this module:

- Log evidence of self-study and research undertaken
- Evidence of completion of eLearning modules
- Structured case report with reflective element for any THREE of the topics outlined above
- Completion of a mini-CEX for each of the following scenarios
 - Sickle cell disease
 - Febrile neutropenia

Indicative Self-Directed Resources

To be added as each module is developed.

12.17 Musculoskeletal and Rheumatology

Brief Description

This module focuses on care of infants and children with musculoskeletal and rheumatological disorders. On completion of the module, trainees will have the knowledge and skills to be able to assess and initiate management of children presenting with musculoskeletal problems in acute and outpatient settings. They will understand the potentially life threatening nature of some of these conditions and when to ask for help.

Learning Outcomes

Following this module, the trainee should be able to:

1. Assess a child presenting with musculoskeletal related disease, including use of pGALS screening tool
2. Formulate a plan to establish the diagnosis including consideration of differential diagnoses
3. Recognise factors that represent underlying or serious pathologies and when to refer to for specialist review
4. Initiate appropriate management, including relevant investigations and treatment
5. Understand the role of non-medical interventions in the management of musculoskeletal pain
6. Understand the diseases associations in paediatric rheumatology, particularly between juvenile arthritis and eye disease

Topics

Topics included in this module are:

- Joint pain/swelling
 - Infection
 - Juvenile Idiopathic Arthritis (JIA).
 - Non-inflammatory musculoskeletal pain
- Non-traumatic limp
 - Leukaemia
 - Septic arthritis
 - Transient synovitis
 - Perthe's disease
 - Slipped Upper Femoral Epiphysis
 - JIA
- Limb pain
 - Malignancy
 - Benign joint hypermobility
 - Marfan's syndrome

- Back/Neck pain
 - Scoliosis
 - Torticollis
- Leg misalignment
 - Rickets
- Multisystem disease
 - Systemic lupus erythematosus
 - Dermatomyositis
 - Vasculitis

Specific Skills / Competencies

- pGALS examination

Teaching and Learning Approach

- Workplace experience (general paediatrics, ED, outpatients, subspecialty)
- eLearning
- Case studies with reflection
- Discussion forum

Assessment Methods

To determine that the trainee has reached the standards of knowledge, skill and competence identified in the learning outcomes, trainees are required to complete the following continuous assessment activities for this module:

- Log evidence of self-study and research undertaken
- Evidence of completion of eLearning modules
- Structured case report with reflective element for any TWO of the topics outlined above
- Completion of one mini-CEX for the following scenario
 - Child with limp

Indicative Self-Directed Resources

To be added as each module is developed.

12.18 Paediatric Intensive Care

Brief Description

This module focuses on care of infants and children who require intensive care. On completion of the module, trainees will have the knowledge and skills to recognise, assess and management an acutely deteriorating child. They will apply a multi-system approach to the management of the child in intensive care and understand the principles of stabilization and transport of the sick child.

Learning Outcomes

Following this module, the trainee should be able to:

1. Understand use of early warning charts and their limitations
2. Identifies and manages the deteriorating child, including seeking the right help in a timely manner
3. Understands the basic principles of ventilation, inotropic, fluid, nutritional and neuroprotective support in intensive care
4. Prepares for and instigates safe patient transport, including appropriate handover
5. Manages the pre and post surgical care of the child in liaison with the surgical team

Topics

Topics included in this module are:

- Acute deteriorating child and early warning scores
- Stabilization of child require transfer to PICU

Teaching and Learning Approach

- Workplace experience (PICU, general paediatrics, ED)
- PALS course
- eLearning
- Case studies with reflection
- Discussion forum

Assessment Methods

To determine that the trainee has reached the standards of knowledge, skill and competence identified in the learning outcomes, trainees are required to complete the following continuous assessment activities for this module:

- Log evidence of self-study and research undertaken
- Evidence of completion of eLearning modules
- Completion of Directly Observed Procedural Skill (DOPS) evaluation forms indicating satisfactory competence for each of the following skills/procedures³:
 - Bag valve mask ventilation
 - Endotracheal intubation of the child
 - Needle thoracocentesis for pneumothorax
 - Intraosseous needle insertion
 - Collection of blood from central lines
- Structured case report with reflective element for any ONE of the topics outlined above

Indicative Self-Directed Resources

To be added as each module is developed.

³ The DOPS may be completed in the context of another module, i.e., when the opportunity arises. Also, although there are 6 separate DOPS listed above the procedures may all be performed as part of a single clinical event. Equally, it may be necessary to evaluate through simulation.

12.19 Child and Adolescent Mental Health

Brief Description

This module focuses on care of infants and children with mental health disorders. On completion of the module, trainees will have the knowledge and skills to be able to assess and initiate management of children presenting with psychological problems in acute and outpatient settings. They will understand the potentially life threatening nature of some of these conditions and when to ask for help.

Learning Outcomes

Following this module, the trainee should be able to:

1. Assess a child presenting with mental health problems
2. Recognizes the signs and symptoms of common and serious mental health conditions such as deliberate self harm, attention deficit hyperactivity disorder, autistic spectrum disorder, depression and psychosis
3. Recognizes and initiates the acute management of young people with severe eating disorders
4. Recognizes the possibility of fabricated induced illness in children with medically unexplained symptoms

Topics

Topics included in this module are:

- Attention Deficit Hyperactivity Disorder
- Autistic spectrum disorder
- Depression
- Deliberate self-harm
- Eating disorders
- Fabricate induced illness

Teaching and Learning Approach

- Workplace experience (general paediatrics, ED, outpatients, subspecialty)
- eLearning
- Case studies with reflection
- Discussion forum

Assessment Methods

To determine that the trainee has reached the standards of knowledge, skill and competence identified in the learning outcomes, trainees are required to complete the following continuous assessment activities for this module:

- Log evidence of self-study and research undertaken
- Evidence of completion of eLearning modules
- Structured case report with reflective element for any TWO of the topics outlined above

Indicative Self-Directed Resources

To be added as each module is developed.

Appendix I – Evaluation Forms

Evaluation Forms will be captured via the online learning platform and will be consistent with the same evaluation forms used on other programs (DOPS, CBC & Mini-CEX).

References:

Frank JR, Snell L, Sherbino J, editors. CanMEDS 2015 Physician Competency Framework. Ottawa: Royal College of Physicians and Surgeons of Canada; 2015.).



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