



الهيئة السعودية للتخصصات الصحية
Saudi Commission for Health Specialties

Saudi Fellowship Advanced General Pediatrics Curriculum



سَبَّحَ لِلَّهِ مَا فِي السَّمَاوَاتِ وَالْأَرْضِ

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1. INTRODUCTION

With an increase in the prevalence and complexity of chronic diseases in pediatrics, there is a growing awareness among stakeholders in many developed and developing countries regarding the need for more general pediatricians to collaborate with subspecialty medical providers in the co-management process for patients who are admitted with acute medical problems in the background of chronic diseases. The implementation of this medical care model, however, may cause many concerns. For example, it is not clear to what degree the general pediatricians –especially recent graduates from a residency program– are comfortable and prepared to take on such roles within the medical health care system. Therefore, establishing an Advanced General Pediatrics Fellowship as a distinct subspecialty is one of the most critical recent developments in pediatrics medicine.

Currently, there are more than twenty accredited fellowship programs in Advanced General Pediatrics in the USA and Canada. Graduates of these programs are expected to play vital roles in both acute and non-acute services by integrating pediatric clinical services in the community, primary care centers, pediatric emergency services, ambulatory care, and by coordinating medical care with different subspecialty services.

Similarly, the presence of qualified general pediatricians in the Kingdom of Saudi Arabia (KSA) is highly desirable. In fact, there may even be a higher need for such clinical services compared to developed countries due to:

- a) An increased number of children in the KSA
- b) A lack of well-established community services in the KSA
- c) Inadequate preventive measures in public health
- d) An increased prevalence in chronic medical diseases (e.g., genetic disorders, trauma victims, and premature babies)

At present, there is no available local fellowship training for Advanced General Pediatrics in our country. The majority of medical providers working in the KSA as general pediatricians graduated from residency programs and were promoted to be consultants in general pediatrics after practicing for three years post-graduation, as per Saudi Council for Health Specialties' regulations. Without completing well-established fellowship training programs, it can be postulated that many general pediatricians will not be adequately prepared for independent practice.

Also, to meet the increment numbers of medical schools in Saudi Arabia, the Saudi Commission for Health Specialties (SCFHS) are obligated to raise the number of available training seats in most residency training programs, including pediatrics specialties. Subsequently, higher numbers of pediatric residents will graduate once they have successfully completed the training program. Hence, creating a local fellowship program in Advanced General Pediatrics will accommodate these graduates, at least, to some extent. Furthermore, providing the KSA with well-trained general pediatricians is in alignment with the Ministry of Health's plan and 2030 Vision for national transformation by providing qualified Saudi pediatricians to serve in the periphery of primary care centers.

The establishment of an Advanced General Pediatrics Fellowship is an important step in the development of a fellow's knowledge, skills, professional development, and research experience. The fellowship curriculum teaches the necessary skills to become effective clinicians, as well as creative and knowledgeable teachers, capable of researching in this field.

In summary, there is a great need to establish an Advanced General Pediatric Fellowship with pediatricians who are equipped with the necessary skills and attributes to meet the pediatric health care needs of our country.

1.1 Resources

The general pediatric services have active outpatient and inpatient services. Currently, there are many consultants in general pediatrics in outpatient clinics, where a wide variety of general pediatric disorders are followed. There are also pediatric primary care clinics, well-baby clinics, and developmental assessment clinics.

The inpatient service consists of general pediatric wards, a day ward, and an isolation ward, which receives many general pediatric admissions from the emergency department, outpatient clinics, and other medical, surgical, and intensive care units. The general pediatric inpatient services are well-integrated with the pediatric emergency department, ambulatory care, pediatric surgery wards, neonatal intensive care units, and pediatric intensive care units. Also, the general pediatric service receives patients who are referred from other hospitals outside major cities, as well as from virtually all regions of the KSA.

1.2 Admission Criteria

To be admitted to the program, the candidate should:

1. Possess the Certificate of Specialty in General Pediatrics from the SCFHS or equivalent qualifications that are recognized by the Saudi Commission for Health Specialties
2. Pass the interview conducted by the selection committee
3. Provide written permission from the candidates' sponsoring institution that allows them to participate full-time in the training program for the entire program (twenty-four months)
4. Hold valid registration from the Saudi Commission for Health Specialties
5. Pay the annual registration fee
6. Comply with admission and registration standards based on the updated bylaws and executive policies (available on SCFHS website)

1.3 Criteria to Accredite a Training Center

The accreditation of centers will follow the bylaws and executive policies of the accreditation department. (Refer to the SCFHS website.)

1.4 Program Content

1.4.1. Knowledge

By the end of the training, the fellow is expected to be able to discuss the scientific basis of Pediatric disease and have acquired knowledge in the following areas:

- Scientific basis of anatomy, physiology, and pathology, as applied to general pediatrics' conditions and diseases
- Scientific basis of biochemistry and genetics, as applied to general pediatrics
- Perinatal care
- Newborn diseases
- Infant feeding and nutrition
- Physical growth, development, and puberty

- Psychomotor and intellectual development
- Fluid, electrolyte, and acid-base disturbances
- Disorders of the alimentary tract and liver
- Respiratory disorders
- Cardiovascular disease
- Disorders of the central nervous system
- Hematological disorders
- Pediatric oncology
- Urogenital disorders
- Endocrine and metabolic disorders
- Immunology and allergy
- Pediatric and neonatal infections
- Pediatric dermatology
- Eye disorders
- Pediatric emergencies
- Pediatric surgery
- Practical aspects of diagnostic imaging
- Pediatric pharmacology and therapeutics, including the principles of metabolism, action, and drug toxicity used in general pediatrics
- Demography, vital statistics, and disease patterns in general pediatrics
- Preventive pediatrics
- Child psychiatry
- Behavior and development
- Evidence-based medicine
- Adolescent health
- Community pediatrics
- Child abuse
- Social pediatrics
- School health programs
- Health education
- Pediatric services quality improvement
- Research methods
- Epidemiology

1.4.2. Program Structure

The total length of the program will be twenty-four months of full-time teaching, training, and research in the principles and practice of general pediatrics. The fellow will participate in:

- Clinical discussion, rounds, and conferences.
- Pediatric Continuing Medical Education (CME), including journal clubs
- Radiology & imaging rounds
- Clinical postgraduate teaching seminars
- Research projects and presentations at regional and national scientific meetings and/or publication in journals

BLOCK (4 WEEKS)	F1	F2
1	CTU	CTU
2	CTU	CTU
3	CTU	CTU
4	CTU	CTU
5	AMB	AMB
6	PICU	AMB
7	DEV PEDS	DEV PEDS
8	CHILD MALTREATMENT	SUBSPECIALTY
9	PER	SUBSPECIALTY
10	ELECTIVE	ELECTIVE
11	RES-QUALITY PROJECT	RES-QUALITY PROJECT
12	(FAMILY & COMMUNITY MEDICINE)	(ADOLESCENT PSYCHIATRY)
13	HOL	HOL

CTU	Clinical Teaching Unit (General Pediatric Inpatient)
AMB	Ambulatory Pediatric
PER	Pediatric Emergency Rotation
PICU	Pediatric Intensive Care Unit
DEV PEDS	Developmental Pediatric
SUBSPECIALTY	Two of the following pediatric subspecialties: neurology, cardiology, endocrinology, infection disease
HOL	Holiday

Key:

1.4.3 Attitudes/Professionalism

Trainees should demonstrate:

1. Compassion and sympathy when dealing with patients, parents, and other family members
2. Professional responsibility for the patient, family, and health care team
3. An understanding of the patients' needs and that of their families, including the nature of their illness(es), their goals, and any possible complications concerning investigation and treatment
4. Honesty, reliability, and dependability
5. Intellectual curiosity
6. Constructive criticism

7. Concern for the psychosocial aspects of the patient's illness
8. Respect for and ability to harmoniously work with allied health care personnel

Upon completion of the fellowship training, the trainees are expected to be competent consultants with a strong knowledge of general pediatrics, who are capable of establishing an effective, professional relationship with patients. They should also be capable of teaching general pediatrics to students, trainees, and allied health care personnel.

1.4.4 Skills

Trainees will obtain a thorough history of infants, children, and adolescents and gain the ability to perform detailed general pediatric examinations. Trainees should demonstrate the ability to:

1. Maintain complete and accurate medical records
2. Appropriately select diagnostic tests
3. Recognize common abnormalities on radiological and other imaging techniques
4. Perform and understand the indications, contraindications, techniques, and complications of general pediatric diagnostic and therapeutic procedures
5. Critically evaluate scientific publications and express familiarity with general pediatric research skills
6. Have self-directed learning skills, like formulating learning objectives, developing action plans, accessing resources (e.g., medical literature), and is committed to maintaining competency

1.4.5. Communication

Trainees should be able to access support services in the community and effectively communicate with patients, families, colleagues, and other health care personnel. Trainees should be able to:

1. Accurately elicit and synthesize relevant information, including the perspectives of patients, families, colleagues, and other professionals
2. Accurately convey relevant information and provide explanations both verbally and by writing to patients, families, colleagues, and other professionals
3. Acquire a common understanding of issues, problems, and plans with patients, families, colleagues, and other professionals to develop a shared care plan
4. Document in writing all of the information regarding a medical encounter

1.4.6. Program Duration

Twenty-four months

1.4.7. On-Call Activities

The fellow will cover general pediatric on-call services during all pediatric inpatient rotations under the supervision of on-call consultants in the general pediatric on-call schedule.

1.4.8. Annual Leave

As per regulations stipulated by the SCFHS

2. OUTCOMES AND COMPETENCIES

2.1 Goals and Objectives of the Program

2.1.1 Goals

Upon completion of the fellowship training program in Advanced General Pediatrics, the candidate will have acquired the knowledge, skills, and competency to function at the consultant level with a solid academic background in General Pediatrics. They will be able to diagnose and manage pediatric diseases with a good understanding of the cultural and socio-economic factors involved.

2.1.2 General Objectives

- To prepare fellows to be competent when functioning independently in general pediatric clinical and academic careers by providing them with the requisite skills to become effective clinicians and a full understanding of the role of general pediatrics concerning the prevention and management of pediatric diseases
- To provide fellows with clinical, teaching, and research skills so they can function as creative teachers and knowledgeable, capable researchers, who can mentor future generations of pediatricians
- To develop skills so that fellows can be advocates for child health services in both the hospital and community, as well as contribute to the improvement of general pediatric, social, and health education policies
- To develop skills in the organization, planning, and management of general pediatric health services
- To develop professional characteristics that include responsibility, intellectual curiosity, self-appraisal, compassion, and a commitment to continue medical education
- To teach fellows to appraise their professional performance, critically assess medical literature, and maintain a high level of competence

At the training's completion, the fellows should acquire core competencies around the following key CanMEDS roles:

- Medical Expert
- Communicator
- Collaborator
- Leader/Manager
- Health Advocate
- Scholar
- Professional

2.2 General Competency Goals

The following are the required core competency goals that apply to multiple rotations. The expert competency goal will largely be rotation-specific, so it will, therefore, be explained separately in each rotation. By the end of the training, each fellow will demonstrate competency in the roles described below.

OUTCOMES AND COMPETENCIES

Trainee Role	Goals and Objectives
Medical Expert	<ul style="list-style-type: none"> • Function effectively by integrating all CanMEDS roles to provide optimal, ethical, and patient-centered medical care • Establish and maintain clinical knowledge, skills, and attitudes appropriate to the training level • Perform a complete and appropriate patient assessment • Effectively use preventive and therapeutic interventions • Demonstrate the proficient and appropriate use of procedural diagnostic and therapeutic skills • Seek appropriate consultation from other health professionals as needed.
Communicator	<ul style="list-style-type: none"> • Develop rapport, trust, and ethical therapeutic relationships with patients and families • Accurately elicit and synthesize relevant information, including the perspectives of patients, families, colleagues, and other professionals • Accurately convey relevant information and explanations to patients, families, colleagues, and other professionals • Develop a common understanding on issues, problems, and plans with patients, families, colleagues, and other professionals to develop a shared care plan • Convey effective oral and written information about a medical encounter
Collaborator	<ul style="list-style-type: none"> • Participate effectively and appropriately in an interprofessional health care team • Effectively work with other health care professionals to prevent, negotiate, and resolve interprofessional conflict
Health Advocate	<ul style="list-style-type: none"> • Respond to an individual patient's health care needs and issues • Respond to the health needs of the communities that they serve • Identify the health determinants of the populations that they serve • Promote the health of individual patients, communities, and populations
Leader/ Manager	<ul style="list-style-type: none"> • Manage daily clinical activities in an efficient and organized manner • Effectively balance personal and professional activities • Develop an approach to resource management in clinical settings as well as on a provincial and national level • Participate in activities that contribute to the effectiveness of their health care organizations and systems • Serve in administration and leadership roles, as appropriate
Scholar	<ul style="list-style-type: none"> • Develop lifelong learning skills to maintain and enhance professional activities • Evaluate medical literature effectively and efficiently, and then, apply this knowledge to patient care • Develop the necessary skills to effectively teach students, peers, other health professionals, and the public • Develop an understanding of research practice and contribute to the dissemination, application, and translation of new medical knowledge and practices
Professional	<ul style="list-style-type: none"> • Through ethical practice, demonstrate a commitment to patients, profession, and society • Participate in profession-led regulations • Demonstrate a commitment to physician health and sustainable practice

2.3 Rotation-Specific Goals and Objectives

The following section defines rotation-specific competency goals that must be met during the rotation. It should be noted that some competencies are also reflected in the logbook documentation of certain procedures.

2.3.1 Teaching Clinical Unit Rotation (Ctu), (General Pediatric In-Patient Rotation)

- This is a four-week rotation performed during the F1 and F2 years of the Advanced General Pediatric Fellowship.
- Four rotations are performed during F1.
- Four rotations are performed during F2.

Trainee's Roles	Goals and Objectives
<p>1 Medical Expert</p>	<p>Pediatrics fellows are able to:</p> <ul style="list-style-type: none"> • Attain expertise in clinical care and perform accurate diagnostic assessments • Create comprehensive, evidence-based treatment plans • Perform the roles of an administrator, academic, researcher, and advocate for the care of hospitalized children • Provide family-centered patient care that is developmentally appropriate, compassionate, and effective for the treatment of acute and chronic health problems and health promotion • Demonstrate knowledge about established and evolving biomedical, clinical, and cognitive sciences and apply this knowledge to patient care and education • Interview patients and families accurately and comprehensively by attending to all developmental levels and/or age-specific needs • Perform a focused history and physical examination when performing consultations, yet also attend to global general pediatric health care issues • Demonstrate recognition of acute problems in pediatric patients with common and uncommon disease states • Demonstrate proficiency in managing comorbid medical issues • Demonstrate recognition of the need for critical care consultation and transfer and efficiently initiate this action • Use critical thinking skills and sound judgment to apply the results of laboratory tests and imaging studies to the patient care decision • Coordinate care for patients with complex conditions and/or those with multiple subspecialty consultants • Appropriately counsel and educate patients regarding their management plans and discharge them with their follow-up needs

	<ul style="list-style-type: none"> • Consistently identify the proper use of procedures and obtain proper informed consent in a manner that is sensitive to cultural, developmental, family, and patient-specific needs • Accurately document all procedures by following appropriate policies and procedures (e.g., time monitoring) • Demonstrate the ability to describe common and uncommon disease states by accurately articulating the pathophysiology for most conditions that are encountered in both community and tertiary pediatric inpatient settings • Articulate risks, benefits, and alternatives to medications and technology choices that are available • Demonstrate knowledge of epidemiology, etiology, diagnosis, and the course of acute medical illnesses in children that require inpatient stabilization • Accurately create a differential diagnosis by properly prioritizing based on patient-specific information • Demonstrate an analytic and investigatory approach to clinical situations and describe the process to other learners • Accurately interpret common laboratory and imaging studies and demonstrate the ability to support an interpretation that is derived from knowledge of the literature, the likelihood of error rates for the study, the prevalence rates of disease states, as well as other information • Demonstrate the use of evidence-based medicine principles when ordering studies • Consistently demonstrate competent performance of the following core skills... <ul style="list-style-type: none"> ○ Lumbar puncture, bladder catheterization, arterial puncture, interpretation of blood gas and acid-base profiles, recording 2-lead electrocardiogram (ECG) and interpretation, nasogastric tube (NGT) insertion, swabs (e.g., throat, eye, ear, wound), cerumen removal, purified protein derivative (PPD) interpretation, IO line insertion, peripheral line insertion, venipuncture, capillary blood sampling, arterial blood sampling, bone marrow aspiration, smear preparation, sedation, pain management, direct-current (DC) shock, resuscitation skills, anthropometry measurements and interpretation, bone age assessment, measuring blood pressure, etc. ○ Medication delivery– inhaled, intramuscular (IM), subcutaneous (SC), or intradermal (ID) ○ Sphygmomanometer, palpation, flush technique, Doppler method, and interpretation, urine dipsticks and interpretation, radiologic interpretation (e.g., from abdominal X-ray, chest X-ray, sinus films, etc., which is done by radiologists)
<p style="text-align: center;">2</p> <p>Communicator</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Demonstrate interpersonal and communication skills that result in effective information exchanges and teaming with patients, families, and the health care team • Identify the self and other members of the health care team to appropriately explain all roles to the patient

	<ul style="list-style-type: none"> • Consistently communicate effectively by using appropriate language at the proper developmental/educational level for the patient and/or caregivers/family; attend to cultural needs by using effective listening skills, and developing a therapeutic relationship with sensitivity to the patients' individual needs • Consistently demonstrate respect for all health care team members, including consultants and primary care pediatricians, by communicating effectively • Assume the appropriate leadership role in the team • Effectively supervise house staff and mid-level providers • Effectively and accurately document information in the health record
<p>3 Collaborator</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Appropriately consult with other physicians and health professionals • Effectively contribute to other multidisciplinary team activities • Coordinate patient care with other health care team members (e.g., medical geneticists, neurologists, and psychiatrists) • With supervision from the attending staff, identify, address, and manage situations of conflict within the health care team, community agencies, and understand the importance of navigating family dynamics • Demonstrate expertise in coordinating care and integrating information to assist the child and family with decision-making and management in order to provide them with realistic goals (e.g., care plans and care directives)
<p>4 Health Advocate</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Identify the important determinants of health affecting patients • Effectively contribute to improving the health of patients and communities as a whole • Recognize and respond to issues when advocacy is appropriate, especially for patients with socioeconomic limitations
<p>5 Leader/Manager</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Demonstrate responsiveness and awareness regarding the larger context of the health care system and the ability to effectively obtain system resources to provide optimal care • Identify and efficiently access appropriate community resources for patients and families • Create safe, comprehensive, and concise discharge plans with an appropriate follow-up • Demonstrate a consistent, cost-effective use of resources, including testing, procedures, medications and consultation services • Adhere to ethical and legal medical coding and billing practices • Discuss the influence of finances on the medical practice at the individual, division, hospital, and national level • Articulate the goals of effective and efficient health care in the hospital setting

	<ul style="list-style-type: none"> • Assist with improving proper patient placement; attend to the safety and satisfaction of the patient/family • Identify opportunities for care pathways and utilize them appropriately • Articulate improvements in the process and clinical outcomes, which are afforded by clinical pathways when properly used • Demonstrate the ability to assess a clinical problem and create an effective aim statement to address the issue • Actively participate in general pediatric inpatient pathway meetings • Lead one interdisciplinary quality or safety group/committee meeting • Attend Quality Improvement (QI) meetings at the hospital level when appropriate • Participate in divisional peer review
<p style="text-align: center;">6 Scholar</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Investigate, evaluate, and ultimately, improve their patient care practices • Appraise and assimilate scientific evidence • Describe the process of practice assessment from identifying key issues for improvement to an analysis for implementing change • Demonstrate a culture of accountability for error identification, reporting, education, and systematic assessment • Discuss evaluation results and interpret, as appropriate, clinical presentations, education, and research • Review articles on presentation skills and apply the information to their practice • Create an individual career plan that includes lifelong learning • Interpret the principles of evidence-based medicine and statistics by demonstrating basic skills based on principles and statistical techniques that are necessary for these analyses (e.g., ARR, NNT, p values, risk ratios, meta-analyses) • Review relevant peer-reviewed articles and interpret them in the context of patient and population care • Locate search engines (e.g., Ovid, MD Consult) to effectively research the literature • Demonstrate responsibility and leadership by engaging learners in the educational process at the appropriate level for fellow/junior faculty members • Effectively participate as an educator for the junior medical staff (e.g., residents, students) and teach others via presentations (e.g., journal clubs, case presentations)
<p style="text-align: center;">7 Professional</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Demonstrate a commitment to carrying out professional responsibilities • Adhere to ethical principles and have sensitivity toward a diverse patient population • Demonstrate initiative and accountability for all aspects of patient care

	<ul style="list-style-type: none"> • Consistently interact with patients, staff, colleagues, and other health professionals in a respectful manner • Consistently demonstrate dedication to the needs of the patient over the self and advocate for patient care needs • Recognize ethical dilemmas and access appropriate resources to address these issues • Adhere to the laws and rules governing the confidentiality of patient information • Obtain proper informed consent from either the patient or family member/legal guardian and recognize the situational need for determining competence • Actively participate in ethics conferences • Engage with social workers on a continual basis to support patient and family needs • Recognize the impact that characteristics (e.g., culture, age, gender, and disability) have on patient care, preferences/perceptions, and outcomes • Consider the impact of a disability on a patient’s life and that of the family • Assume a leadership role in various inpatient settings • Function as the Director of Inpatient Services during a hospital rotation at the attending level with direct and indirect supervision • Seek, accept, and deliver effective feedback • Seek opportunities to educate and counsel learners, as appropriate, based on principles of professional behavior, attitude, and dress • Articulate the structures of the administration and basic hospital medical staff; define the role of the hospitalist within these • Arrive promptly to conferences and meetings
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2.3.2 Ambulatory Care Rotation

- This is a four-week rotation performed during the F1 and F2 years of the Advanced General Pediatric fellowship.
- One rotation is performed during F1.
- Two rotations are performed during F2.
- Pediatrics fellows can integrate all of the CanMEDS roles and apply their medical knowledge, clinical skills, and professional attitudes to the provision of patient-centered care.

Trainee’s Roles	Goals and Objectives
<p style="text-align: center;">1</p> <p>Medical Expert</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Effectively function as a consultant to efficiently perform comprehensive diagnostic assessments and build broad, evidence-based treatment plans for children with medical and non-medical issues in outpatient settings • Perform a medical interview and a physical examination for a child with a chronic illness, which includes the effects of chronic illness (e.g., growth/development, emotional, economic, and psychosocial functioning of the patient and family), as well as the treatments used (e.g., “complementary and alternative therapies”)

	<ul style="list-style-type: none"> • Demonstrate the ability to measure and assess growth (e.g., height/length, weight, head circumference, and body mass index) during in-patient encounters using standard growth charts • Learn outpatient management skills to allow the timely and efficient achievement of patient outcomes and recognize when there is a need for urgent inpatient management • Refine consultant skills in the context of outpatient internal medicine patient care • Develop independence in the management of common multisystem illnesses • Interact with patients in a long-term relationship to monitor their illnesses • Become familiar with approaches regarding the diagnosis and management of a wide variety of problems • Develop comprehensive treatment plans • Request appropriate investigations, consultations, and collateral information • Describe the effect(s) of the family unit, socio-cultural issues, and ethical issues (e.g., growth, development, illness, and therapeutic intervention) • Prioritize and assess the urgency of patient issues and manage their appointment schedule to accommodate them • Prioritize patient care issues and appropriately plan a follow-up • Recognize when a patient requires urgent care due to rapidly progressive indications • Effectively provide consultation over the phone to another health care provider regarding the management of a pediatric patient • Demonstrate knowledge in the longitudinal care of common and complex chronic patients • Demonstrate proficiency in relevant comorbid medical issues • Demonstrate advanced knowledge of the scientific literature and clinical practice guidelines • Develop dictation skills • Demonstrate knowledge of the etiology, pathology, clinical features, diagnosis, prevention, and treatment of common and complex pediatric conditions, as well as developmental and behavioral disorders <p><i>This includes but is not limited to...</i></p> <ul style="list-style-type: none"> ○ Hematological (e.g., iron deficiency anemia, chronic anemia) ○ Respiratory (e.g., management of asthma, approach to chronic cough) ○ Gastrointestinal (e.g., recurrent abdominal pain, failure to thrive, constipation, reflux/GERD, approach to diarrhea) ○ Cardiovascular (e.g., heart murmur, arrhythmias, syncope) ○ Infectious disease (e.g., recurrent UTI, skin infections, fungal infection, lice, scabies) ○ Rheumatology (e.g., juvenile rheumatoid arthritis, Kawasaki disease, HSP) ○ Nephrology (e.g., hematuria, proteinuria)
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	<ul style="list-style-type: none"> ○ Genetic and metabolic disorders (e.g., fatigue, weight loss, obesity, depression, enuresis, eating disorder, hepatosplenomegaly, lymphadenopathy) ○ Orthopedic (e.g., leg pain, limping) ○ Neurological (e.g., headaches, movement disorders, seizure disorders) ○ Endocrinology (e.g., short stature, thyroid disorder) • Learn the skills of outpatient technical and therapeutic procedures <i>This includes but is not limited to...</i> <ul style="list-style-type: none"> ○ Bladder catheterization ○ Conjunctival swab ○ Medication delivery: inhaled, intramuscular (IM), subcutaneous (SC), or intradermal (ID) ○ ECG interpretation ○ PPD interpretation ○ Radiologic interpretation (e.g., abdominal X-ray, chest X-ray, sinus films)
<p style="text-align: center;">2</p> <p>Communicator</p>	<p>Pediatrics fellows are able to:</p> <ul style="list-style-type: none"> • Communicate clearly, empathically, and effectively with patients, families, and other care providers • Demonstrate the effective use of tools for gathering historical information from patients and their families • Elicit patients' concerns and views during care • Generate and provide medical reports for the patients according to their needs • Provide patients with essential information related to their diagnosis, prognosis, and treatment in a clear manner that encourages patient autonomy and participation in the decision-making process of their care plan • Clearly and accurately document patient encounters (including the disclosure of side effects or treatment risks), phone conversations, and other patient communication • Clearly communicate the relevant issues of a patient to a transplant program when there is a need for advice or the transfer of care
<p style="text-align: center;">3</p> <p>Collaborator</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Seek and incorporate the advice of other practitioners in the care of their patients. • Work closely and collaborate effectively with patients, family, and all health care team members • Work in a "Case Manager" role in a multidisciplinary team for children with complex needs and problems • Demonstrate skills in conflict negotiation and resolution • Be a resource for institutional and community organizations that are devoted to child development and well-being • Know the environment's contributors to allow integrated services to best serve the patient • Master the principles of teamwork

<p style="text-align: center;">4</p> <p>Health Advocate</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Consistently act to advance the care of ambulatory patients within the health care system • Link patients to the appropriate programs and services on an ongoing basis • Demonstrate an understanding of government therapy funding and regularly act to ensure patients' access to therapies through these programs, as needed • Consistently identify barriers (e.g. financial, social, and psychological) to patient care and develop plans to overcome them • Promote disease prevention with patients and facilitate the institution of preventative measures • Display an advanced understanding of health advocacy at the institutional and community levels • Provide education and teaching sessions for families and children to promote safety and healthy environments for children • Contribute to the development of new knowledge • Teach future primary care pediatricians to recognize and address the multifaceted issues that affect children's health
<p style="text-align: center;">5</p> <p>Leader/Manager</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Arrange care both within and outside of the office setting to allow the timely and efficient achievement of patient outcomes • Assess the priority and urgency of patient issues and manage their own appointment schedule to accommodate them • Prioritize patient care issues and appropriately plan follow-ups • Recognize when a patient requires specialized care • Work effectively and efficiently in a health care organization according to available resources • Utilize information technology to optimize patient care, lifelong learning, and other activities to efficiently manage time • Develop an understanding of the management principles related to ambulatory care services
<p style="text-align: center;">6</p> <p>Scholar</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Identify their learning needs and address them to develop a comprehensive understanding of the content • Develop a personal learning plan that covers the core learning objectives of the rotation • Recognize resources to maintain knowledge in the field on an ongoing basis • Provide a sense of focus and a clear teaching point by using a one-minute preceptor • Establish successful relationships with mentors for academic guidance, to review ongoing research, as well as to provide feedback in clinical activities and duties

	<ul style="list-style-type: none"> • Conduct bi-monthly seminars by critically appraising the evidence to strengthen knowledge as well as fine-tune presentation skills and teaching methods • Promote a positive learning environment for residents by using appropriate teaching strategies
<p>7 Professional</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Recognize and act on the particular professional duties of the ambulatory experience • Be punctual and reliable when attending the ambulatory experience • Complete tasks as they begin, including documentation, following up on tests, and other aspects of patient care • Demonstrate professional attitudes when interacting, either in the office or between visits, with patients, families, office staff, and other health care professionals

2.3.3 Child and Adolescent Psychiatry Rotation

- This is a four-week rotation performed during the F2 year for the Advanced General Pediatric Fellowship.
- Fellows will be supervised by a child psychiatrist during this rotation.
- Utilize this rotation to review psychiatric disorders that are likely to present to a general pediatrics fellow.

Trainee's Roles	Goals and Objectives
<p>1 Medical Expert</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Effectively function as a consultant and perform efficient, comprehensive diagnostic assessments to build broad, evidence-based treatment plans for adolescents that present with behavioral and mental health problems in a collaborative care setting • Establish and maintain a theoretical and practical knowledge of the clinical, developmental, and basic sciences that is relevant to special areas of expertise with common adolescent disorders • Effectively link pediatric diseases to mental health • Describe the unique features of the physician-patient relationship during adolescence, including confidentiality and consent • Gain knowledge of epidemiology, natural history, psychology, and systemic aspects of major psychiatric disorders in children and adolescents • Conduct psychiatric interviews with parents and other caregivers; perform the appropriate psychiatric exams, including the mental status exam • Formulate a working diagnosis, including a differential, and a fitting problem list • Competently recommend appropriate treatment(s) under the guidance of the child psychiatrist • Demonstrate clinical knowledge and skills that are pertinent to the diagnosis and management of common adolescent disorders

	<ul style="list-style-type: none"> • Obtain the necessary information regarding adolescent activity, behavior, family/social interaction (with a specific reference to psychosocial issues), risk-taking behavior, and protective factors (by using the HEADSS method) Use interviewing techniques with adolescent patients to ask sensitive questions about lifestyle choices that affect health and safety (e.g., sexuality, drug, tobacco, and alcohol use) and give appropriate counseling, while responding to the young person's need for privacy and confidentiality in the context of family needs • Assess the growth and anthropometric parameters of the adolescent (e.g., the Tanner scale) and compare the results to the norms • Explain the relationship between the following axis': somatotropin, hypothalamic-pituitary-adrenal/gonadal, and thyroid • Compare the physical changes of puberty in both males and females and explain the hormonal changes of puberty with a physical examination, linear growth, and skeletal maturation in both genders • Explain the physiological basis of precocious puberty and the delayed onset of puberty • Identify and prevent risky behavior • Gain knowledge about psychopharmacological agents, indications, side effects, and interactions • Gain knowledge about psychotherapies, indications, and potential caveats • Describe common risk-taking behaviors of adolescents (e.g., early/unsafe driving, smoking, alcohol, other drug use, sexual activity, and violence) • Describe the contributions of unintentional injuries, homicide, suicide, and HIV/AIDS to the morbidity and mortality of adolescents • Describe the features of common mental health problems in adolescence (e.g., school failure, attention deficit disorder, body image disorders, eating disorders, depression, and suicide) • Describe an approach to counseling an adolescent regarding substance abuse and personal safety • Describe the unique difficulties encountered by adolescents with chronic diseases, including adherence and issues of autonomy versus dependence • Discuss the characteristics of early, middle, and late adolescence in terms of the cognitive and psychosocial development • Assess sexual health through observation and directly • Establish the developmental level and adequacy of the psychosocial adaptation of youth through the adolescent years • Explain the general management of specific illnesses related to adolescence, including reproductive health, substance abuse, eating disorders and the impact of chronic health conditions • Outline the clinical aspects of eating disorders and the etiology, complication, and management plan of adolescents who are overweight or obese • Recognize different categories of psychosomatic disorders and their presentation
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	<ul style="list-style-type: none"> • Describe the clinical presentation and diagnostic criteria to diagnose major depressive disorders and Generalized Anxiety Disorders (GAD) • Explain the clinical presentation of substance abuse in this population • Describe the presentation of an adolescent with suicidal intentions and the required actions • Understand and explain the physical and mental conditions that cause acute emergencies in this age group (e.g., eating disorders, sexually transmitted infections, pelvic inflammatory disease, acute intoxication, intentional and unintentional injuries) • Understand the etiology, epidemiology, diagnosis, course of illness, effective treatment, and clinical practice guidelines that are relevant to adjustment disorders, relational problems, issues related to abuse/neglect, and conditions related to mental disorders that may require clinical attention <p><i>These topics include but are not limited to...</i></p> <ul style="list-style-type: none"> ○ Autism spectrum disorders ○ Attachment disorders ○ Communication disorders ○ Delirium and other cognitive disorders ○ Developmental coordination disorder ○ Eating disorders ○ Elimination disorders ○ Generalized Anxiety Disorders (GAD) ○ Psychosomatic disorders ○ Anxiety disorders in children and adolescents ○ Attention deficit hyperactivity disorder ○ Disruptive behavior disorders ○ Mood disorders in children and adolescents
<p style="text-align: center;">2 Communicator</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Counsel about a variety of issues, such as risk-taking behaviors, positive youth development, vocational planning, carrier counseling, healthy and active living, self-advocacy, autonomous health care skills, social support, and safe choices for youth and families • Develop a positive, non-judgmental attitude towards adolescents and respect their needs for privacy and confidentiality • Impart important health care information to teenagers, families, and other health care providers that are supporting youth • Legibly document patient findings in the medical records in a timely manner • Create efficient, informative reports and medical records that are related to school health

<p>3 Collaborator</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Utilize additional resources within the medical and social services community to benefit adolescents both independently and in the context of multidisciplinary health care • Describe the necessary mechanism for referral that is specific to youth provided by the community and specialized services at tertiary centers • In case reports, demonstrate knowledge about a variety of social issues that influence adolescent health and the etiology of adolescent morbidity and mortality
<p>4 Health Advocate</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Discuss the essential rights of adolescents to make their own health care decisions, particularly in relation to declining treatment or making procedural decisions • Impart important health care information to adolescents and the health care system that interfaces with and looks after youth • Offer a support system to help families care for their teenagers • Identify the principles of health promotion and disease prevention and integrate these in clinical encounters
<p>5 Leader/Manager</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Demonstrate how to be an effective member of a multi-disciplinary team by providing health care and support to adolescents, families, the community, and all of those in hospital settings
<p>6 Scholar</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Impart important health care information to teenagers, families, and other health care providers • In case reports, demonstrate knowledge regarding a variety of medical, psychological, and social issues that influence adolescent health • Demonstrate evidence-based health care inpatient management • Integrate clinical knowledge and effective preventive and promotive health care in schools
<p>7 Professional</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Develop the flexibility to meet appointment schedules that are desired by adolescents, which may be less familiar • Understand and demonstrate responsibility towards youth, parents, social services, and legal authorities • Apply professionalism and ethics when making decisions regarding individual patient care • Act professionally when dealing with the care of patients/families, school health, and other interactions with health care teams/communities

2.3.4. Family and Community Rotation

- This is a four-week rotation that is performed during the F1 year of the Advanced General Pediatric Fellowship.

Trainee's Roles	Goals and Objectives
<p style="text-align: center;">1</p> <p>Medical Expert</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Promote health and wellbeing practices in the community • Implement local strategies for preventive and promotive health care services for all children and adolescents in their area, including safeguarding policies and overseeing universal and targeted lifestyle programs • Hold clinics in a variety of settings, including schools, with an emphasis on continuity of care • Possess strong skills when it comes to working with multiple agencies, particularly within education and social care • Identify the requirements for screening programs and their role in community care • Develop strategic planning and incorporate it into routine health supervision to prevent illness and injury • In the school environment, identify health promotion and conduct health assessments, including <ul style="list-style-type: none"> ○ School health programs (preventive and curative) ○ Common problems encountered among students ○ Health education in schools ○ School immunization programs • List the components of health supervision for an adolescent (e.g., personal habits, pubertal development, immunizations, acne, obesity, diabetes, scoliosis, sports participation, and indications for a pelvic exam) • Plan health care services • Conduct a health supervision visit for a healthy adolescent, incorporating a psychosocial interview, developmental assessment, as well as appropriate screening and preventive measures • Advocate for both a patient's health care needs and that of the community, including... <ul style="list-style-type: none"> ○ Anticipatory care screening ○ Regular health checks ○ Well baby clinics ○ Child health surveillance ○ Travel health ○ Sport health • Identify the principles of the chronic disease care model and effective anticipatory care in family practice • List the recommended immunizations in high-risk groups by following evidence-based guidelines • List the immunizations that are currently recommended from birth through adolescence and identify patients with delayed immunizations

	<ul style="list-style-type: none"> • Describe the rationale and general indications and contraindications of immunizations • Assess and monitor the health status, growth, and development of infants and children in the family practice • Diagnose and manage common health problems in newborns, infants, and children • Describe the types of problems that benefit from a community approach rather than an individual approach • Prepare health education plans • Construct health education projects for lifestyle interventions • Prepare healthy living projects (e.g., diet, exercise, obesity, smoking, drug addiction) • Define vulnerable and at-risk patient groups • Identify the principles of health economics • Demonstrate proficiency in pediatric assessment and the management of vulnerable children, including those with developmental disorders and disabilities • Adopt a leading role with children who are either at risk of abuse or are being abused, as well as children looked-after (CLA) • Contribute to the process of adoption, as necessary • Demonstrate strong skills when working with multiple agencies, especially education and social care • Define daily dietary requirements for children and adolescents • Describe barriers that prevent children from gaining access to health care, including financial, cultural, and geographic barriers • Identify the effect of recent technology on social and physical impairments among adolescents • Describe injuries that cause the majority of deaths in childhood and adolescence • Describe how the risk of illness and injury may change during stages of growth and development and provide examples • Describe infection control precautions that assist in limiting the spread of infectious diseases in patients and health care providers (e.g., handwashing, masks, and N-95 masks for patients with tuberculosis) • Explain how screening for family violence may serve as an important preventive health practice • Offer a support system to students, teachers, and families
<p style="text-align: center;">2 Communicator</p>	<p>Pediatrics fellows are able to:</p> <ul style="list-style-type: none"> • Communicate clearly, empathically, and effectively with patients, families, and other health care professionals • Utilize technology to enhance communication with individuals, their community, and health care professionals • Develop a common understanding of issues with patients, families, colleagues, and other professionals to develop a shared care plan

<p>3 Collaborator</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Collaborate effectively with health care professionals and participate in teamwork and interprofessional activities • Document and share patient information appropriately to facilitate clinical decision-making while preserving the confidentiality • Demonstrate skills in conflict negotiation and resolution • Develop a common understanding of issues and problems with patients, families, colleagues, and other professionals to develop a shared care plan
<p>4 Health Advocate</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Advocate for the health needs and priorities of individuals, families, and display an advanced understanding of health advocacy at the community level • Promote disease prevention with patients and facilitate preventative measures • Provide education and teaching sessions for families and children to promote safety and a healthy environment for children
<p>5 Leader/Manager</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Assess, improve, and monitor the quality of care delivered to patients and their families • Manage any conflicts in the workplace effectively and professionally, including conflicts within the health care team and disputes between patients and families • Assess the priority and urgency of patient issues and manage their appointment schedule to accommodate them • Prioritize patient care issues and appropriately plan a follow-up • Recognize when a patient requires specialized care • Work effectively and efficiently in a health care organization and utilize all available resources • Employ information technology to optimize patient care, lifelong learning, and manage time efficiently
<p>6 Scholar</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Educate individuals and the community, including patients, students, residents, and other health care professionals • Integrate the best available evidence into practice while considering context, the epidemiology of the disease, comorbidity, and patient complexity
<p>7 Professional</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Develop and maintain professional conduct, as well as a sense of accountability • Demonstrate a commitment to physician health and wellbeing • Demonstrate professional attitudes when interacting with patients, families, and other health care professionals

2.3.5. Pediatric Critical Care Rotation:

- This is a four-week rotation that is performed during the F1 year of the Advanced General Pediatrics Fellowship.
- Pediatric intensivist(s) will supervise the fellow during this rotation.

Trainee's Roles	Goals and Objectives
<p style="text-align: center;">1</p> <p>Medical Expert</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Demonstrate a high standard of professional competence while working with patients in the Pediatric Intensive Care Unit • Provide compassionate, effective, family-centered patient care to treat health problems and promote health that is appropriate according to the patient's development and age • Use a logically appropriate clinical approach to the care of critically ill patients by applying the principles of evidence-based decision-making and problem-solving • Demonstrate a commitment to having the knowledge base that is expected of general pediatricians who are caring for seriously ill children under the guidance of an intensivist • Either have the medical knowledge or efficiently access it, and then, critically evaluate it to appropriately apply the information to patient care in the PICU • Demonstrate the ability to rapidly perform history and physical exams for critically ill patients • Provide sensitive support to patients with serious illness, as well as their families, and arrange for on-going support or preventive services, as needed • Recognize and treat common life-threatening conditions in a PICU setting • Recognize and treat hemodynamic instability for a critically ill PICU patient • Demonstrate the ability to perform procedures in a PICU setting <p><i>These include but are not limited to...</i></p> <ul style="list-style-type: none"> ○ Maintain an open airway in a non-intubated, unconscious patient ○ Endotracheal intubations ○ Mechanical ventilation (while using different modes of the ventilator) ○ Central venous catheter placement ○ Arterial blood gas specimen and collection ○ Arterial catheter placement ○ Enteral feeding tube placement ○ Total parenteral nutrition management ○ Thoracentesis and chest tube insertion ○ Paracentesis ○ Lumbar puncture ○ Tracheostomy

	<ul style="list-style-type: none"> • Demonstrate the ability to use and interpret data from ECG monitors, ECGs, cardiac outputs, hemodynamic monitoring, arterial blood gases, pulse oximetry, end-tidal CO₂ monitors, and respirators • Describe the dosages, indications, and contraindications of pharmacologic interventions for shock, cardiac failure, respiratory failure, dysrhythmias, sepsis, etc. • Demonstrate the ability to manage a patient while experiencing a ventilator, respiratory failure, cardiac failure, dysrhythmia, sepsis/septic shock, upper airway disease (e.g., stridor, foreign bodies, congenital anatomical abnormalities), acute renal failure, fluid and electrolyte disturbance, diabetic ketoacidosis, toxic ingestions/poisonings, trauma (e.g., acute traumatic spinal cord injuries) • Demonstrate appropriate judgment when managing critically ill patients • Demonstrate the appropriate prioritization of diagnostic and therapeutic interventions for critically patients • Demonstrate an appropriate understanding for when to use consultants for critically ill patients • Demonstrate an understanding of the ethical and legal principles that apply to the care of critically ill patients
<p style="text-align: center;">2</p> <p>Communicator</p>	<p>Pediatrics fellows are able to:</p> <ul style="list-style-type: none"> • Provide effective and sensitive communication with patients and families in an intensive care setting • Participate effectively as part of an interdisciplinary team in the intensive care unit to create and sustain information exchange, including communication with the primary care physician • Maintain accurate, timely, and legally appropriate medical records on complex and critically ill children
<p style="text-align: center;">3</p> <p>Collaborator</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Recognize and respect the roles of other physicians, nursing staff, respiratory therapists, physiotherapists, occupational therapists, nutritionists, pharmacists, social workers, and support staff in the provision of optimal patient care in an ICU setting • Recognize that effective teamwork is critical in the ICU setting and demonstrate proficiency in working effectively within the ICU health care team • Appropriately consult specialist physicians to optimize patient care
<p style="text-align: center;">4</p> <p>Health Advocate</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Recognize and respect diverse cultural, social, and religious factors that may influence patient health and affect patient interaction with the health care system • Recognize important risk factors for critical illnesses and, when possible, counsel patients and families accordingly to reduce recurrence risks • Demonstrate an awareness of the medical and societal issues concerning brain death and organ donation and develop a strategy to introduce this issue in family discussions when necessary

<p>5 Leader/Manager</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Understand how to practice high-quality health care and advocate for patients within the context of the health care system • Effectively use information technology, such as searching in medical databases, to optimize patient care • Utilize health care resources in a scientifically, ethically, and economically defensible manner • Be aware of and utilize clinical practice guidelines when appropriate • Demonstrate effective time management skills to achieve a balance between professional and personal responsibilities
<p>6 Scholar</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Develop an effective personal learning strategy • Generate clinical questions related to patient care, and then, develop and implement evidence-based solutions to these questions by utilizing and analyzing available resources • Demonstrate effective teaching skills for dealing with additional junior trainees, patients, families, and other health care personnel • Actively participate in organized educational activities, including rounds and team meetings • Demonstrate knowledge, skills, and the appropriate attitude needed for continuous self-assessment • Utilize scientific methods and evidence to investigate, evaluate, and improve patient care practice in a PICU setting • Identify personal learning needs by systematically organizing relevant information and resources for future reference to plan for continuing the acquisition of knowledge and skills
<p>7 Professional</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Demonstrate a commitment to carrying out professional responsibilities while adhering to ethical principles, sensitivity to diversity among critically ill children, and providing care in the PICU setting • Demonstrate self-awareness, including an awareness of their own limitations • Describe how ethical principles guide the approach to managing patients with a critical illness, including principles related to surrogate decision-making for critically ill patients who are unable to speak for themselves

2.3.6 Pediatric Emergency Rotation:

- This is a four-week rotation that is performed during the F1 year of the Advanced General Pediatric Fellowship.
- The fellow will be under the direct supervision of the attending pediatric emergency consultant during this rotation.

- To graduate, the pediatric fellow must be clinically proficient in the practice of Pediatric Emergency Medicine with emphasis on the acutely ill/injured child. They must also be competent in research and teaching Pediatric Emergency Medicine. Finally, they should be familiar with administrative issues.

Trainee's Roles	Goals and Objectives
<p style="text-align: center;">1</p> <p>Medical Expert</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> Emphasize the importance of immediate recognition, evaluation, care, and disposition of pediatric patients in response to acute illness and injury Demonstrate knowledge of epidemiology, etiology, diagnosis, and the course of acute illnesses in children with emergencies Complete a focused history and physical exam in an Emergency Department (ED) setting Initiate early treatment of true medical and surgical emergencies in critically ill patients to mitigate significant morbidity and/or mortality Manage multiple patients simultaneously by multitasking and simultaneously evaluating, treating, and prioritizing multiple patients with different levels of acuity Arrange a sound disposition and follow-up for patients that are admitted to the hospital or discharged from the ED Create a working differential diagnosis of undifferentiated pediatric patients prior to a formal presentation to the attending ED physician, which includes all potentially life-threatening conditions Differentiate between patients who warrant inpatient admission and those who may be safely discharged Emphasize the importance of directing patients to a source of follow-up care in/out of the hospital Request appropriate investigations, consultations, and collateral information Demonstrate proficiency in managing comorbid medical issues Appropriately locate and use evidence-based medicine in the diagnosis and treatment of ED pediatric patients Use information technology (e.g., lab and imaging studies) to support and enhance diagnosis and therapeutic decisions Selectively order and interpret the appropriate ancillary studies (e.g., laboratory and imaging tests) for an efficient disposition of pediatric patients in the ED Recognize the need for emergent consultative services for patients with needs that cannot be met by ED physicians See an appropriate number of patients according to their skill level Perform high-level skills and procedures that are both clinical and technical in the Pediatric ED setting

Core Topics/Skills:	
Emergent Clinical Problem	Diagnoses to Consider
<ul style="list-style-type: none"> • Airway obstruction/respiratory distress 	<ul style="list-style-type: none"> • Croup • Bronchiolitis • Asthma • Pneumonia • Foreign body • Aspiration • Anaphylaxis • Peritonsillar • Retropharyngeal abscess
<ul style="list-style-type: none"> • Altered mental status (delirium/lethargy) 	<ul style="list-style-type: none"> • Head injury • Increased intracranial hypertension (ICP) • Substance abuse • Infection (e.g., encephalitis, meningitis) • Diabetic ketoacidosis, Hypoglycemia • Abuse • Shock • Hypoxemia
<ul style="list-style-type: none"> • Apnea • Shortness of breath 	<ul style="list-style-type: none"> • Acute life-threatening event (ALTE) • Seizures • Respiratory infections (e.g., RSV and pertussis) • Gastroesophageal reflux disease (GERD) • Sepsis • Cardiac dysrhythmias • Holding the breath
<ul style="list-style-type: none"> • Ataxia 	<ul style="list-style-type: none"> • Ingestion • Infection • Tumor
<ul style="list-style-type: none"> • Gastrointestinal bleeding • Abdominal pain 	<ul style="list-style-type: none"> • Meckel's diverticulum • Fissure • Intussusception • Inflammatory bowel disease • Allergic colitis • Peptic ulcer disease
<ul style="list-style-type: none"> • Injuries and accidents 	<ul style="list-style-type: none"> • Animal bites • Minor head injury • Nursemaid's elbow • Sprains and fractures • Burns • Near drowning • Lacerations

	<ul style="list-style-type: none"> • Proptosis 	<ul style="list-style-type: none"> • Tumor • Orbital cellulitis
	<ul style="list-style-type: none"> • Seizures 	<ul style="list-style-type: none"> • Infection (e.g., meningitis or encephalitis) • Status epilepticus • Febrile • Ingestion • Hypoxemia • Shock • Electrolyte disturbances • Tumor
	<ul style="list-style-type: none"> • Shock 	<ul style="list-style-type: none"> • Sepsis • Severe dehydration • Diabetic ketoacidosis • Anaphylaxis • Congestive heart failure • Ingestion • Burns • Neurogenic shock • Ductal dependent heart lesions • Adrenal insufficiency
	<ul style="list-style-type: none"> • Suicidal ideation 	<ul style="list-style-type: none"> • Depression
	<ul style="list-style-type: none"> • Drug toxicity • Ingestions • Poisoning 	<ul style="list-style-type: none"> • Acetaminophen, iron, tricyclic antidepressants, volatile hydrocarbons, and caustics
	<ul style="list-style-type: none"> • Burn 	<ul style="list-style-type: none"> • Chemicals, fire
	<ul style="list-style-type: none"> • Pediatric fever 	<ul style="list-style-type: none"> • Sepsis
	<ul style="list-style-type: none"> • Anemia with jaundice 	<ul style="list-style-type: none"> • Hemolytic anemia
<p>2 Communicator</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Demonstrate collaborative practices within the structure of the ED team • Possess the necessary listening and communication skills to work effectively with patients and family members • Understand the difference between “sick” and “not sick” and communicate this to the ED attending physician in succinct presentations • Communicate clearly and effectively with consultants by posing purposeful, focused questions about patient care and further management 	
<p>3 Collaborator</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Recognize that effective teamwork is critical in the pediatric ED setting • Demonstrate proficiency in working effectively within the pediatric emergency health care team 	

4 Health Advocate	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Provide education and teaching sessions for families and children to promote safety and a healthy environment for children • Contribute to the development of new knowledge
5 Leader/Manager	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Assume the role of pediatric emergency team leader and take responsibility for this domain of service • Demonstrate the supervisory and administrative aspects of emergency services, ambulance services, communication systems, and disaster planning • Effectively manage and coordinate patient flow, staffing, safety, and quality in a PED
6 Scholar	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Conduct a systematic search for evidence • Evaluate current literature to substantiate their findings
7 Professional	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Demonstrate a commitment to carrying out professional responsibilities while providing care in the pediatric ED setting • Adhere to ethical and legal principles while being sensitive to diversity in caring for critically ill children • Demonstrate self-awareness, including an awareness of their own limitations • Demonstrate punctuality, attendance, and a work pace that is appropriate to their skill level • Treat all patients, colleagues, family members, and ancillary staff with respect and compassion

2.3.7 Child Maltreatment Rotation:

- This is a four-week rotation that is performed during the F1 year of the Advanced General Pediatric Fellowship.
- Fellows need to understand the medical, legal, and social implications of suspected abuse and recognize the role of the physician in preventing child abuse and family violence. This is accomplished through routine assessments of family dynamics, early identification of at-risk children, and cooperation with community services that support families.

Trainee's Roles	Goals and Objectives
<p style="text-align: center;">1</p> <p>Medical Expert</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Manage acute and chronic manifestations of child abuse • Act as a competent physician in a multidisciplinary field • Be familiar with administrative, legislative, and policy issues concerning child maltreatment • Elicit appropriate clinical histories for pediatric patients with suspected child maltreatment concerns • List characteristics of the history and physical examinations that should trigger concern for possible physical, sexual, and/or psychological abuse and neglect (e.g., inconsistency in the history, unexplained delays in seeking care, injuries with specific patterns or distributions on the body, and/or injuries incompatible with the child's development) • Describe the medical and legal importance of a full, detailed, carefully documented history, and physical examination concerning the investigation of child abuse • Understand the epidemiology of childhood injuries in Saudi Arabia, including risk factors for child abuse/neglect and family violence • Recognize the "red flags" and signs of physical abuse • Recognize typical and atypical child behavior and development as it pertains to child abuse • Possess knowledge of the anatomy and pathophysiology of organ systems as they relate to child abuse, including sexual development and urogenital anatomy, as an initial assessment • Know the principles of toxicology • Appropriately perform physical examinations for pediatric patients with suspected child maltreatment concerns • Select the appropriate laboratory and radiologic tests, which incorporate ethical and medico-legal considerations • Demonstrate an ability to appropriately consult medical specialists when caring for patients with child maltreatment concerns • Develop appropriate diagnostic medical opinions regarding patients with suspected child maltreatment concerns, including the consideration of a relevant differential diagnosis • Develop appropriate management plans for patients with suspected child maltreatment concerns • Demonstrate an understanding of the relevant controversies and limitations concerning medical opinions about child maltreatment • Skillfully document child abuse in medical assessments, referrals to forensic centers, and other recommendations • Know the indications for requesting an evaluation of a child's sibling who has been abused • Summarize the responsibilities of the mandated reporter to identify and report suspected child abuse; know who to make out this report to • Describe the unique communication skills required to work with families around issues of maltreatment

<p style="text-align: center;">2</p> <p>Communicator</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Convey a positive, non-judgmental attitude towards patients and families • Effectively communicate information and the treatment plan to patients and families, when appropriate, in a sensitive, comprehensive manner • Clearly and concisely communicate clearly with allied health professionals, including other physicians and non-medical professionals, when responding to child maltreatment • Verbally present cases in an accurate, complete and organized fashion • Maintain clear, accurate, and appropriate records (either written or electronic) of clinical encounters and follow-up plans • Prepare written documentation (including consultation letters) in an accurate, organized, and timely manner
<p style="text-align: center;">3</p> <p>Collaborator</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Demonstrate proficiency working in an interdisciplinary team by having effective, respectful communication and collaboration within the team to support patients and their families • Clearly describe the roles and responsibilities of a general pediatrician • Demonstrate an understanding of the roles and responsibilities of other professionals within the health care team, child protection agencies, law enforcement, and forensic pathologists • Effectively participate in interprofessional team meetings • Identify and utilize collaborative strategies to prevent and manage issues concerning conflict • Utilize community and social services by having a multidisciplinary approach to patients (e.g., mental health services and child protection services)
<p style="text-align: center;">4</p> <p>Health Advocate</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Advocate on behalf of the patient and family to obtain the necessary services and support • Identify opportunities for advocacy, health promotion, and disease prevention in the community and respond appropriately • Identify the potential psychosocial, developmental, economic, and societal risk factors for child abuse and neglect; work to assist families in addressing these issues
<p style="text-align: center;">5</p> <p>Leader/Manager</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Effectively use information technology, such as searching medical databases, to optimize patient care

6 Scholar	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Contribute to the education of house residents, students, and other health care professionals • Provide effective presentations to both medical and non-medical audiences • Conduct a systematic search for evidence
7 Professional	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Exhibit the appropriate professional behaviors when practicing in Child Abuse Pediatrics, such as honesty, integrity, commitment, compassion, empathy, responsibility, respect, appreciation for diversity, and a non-judgmental, objective approach to child abuse detection and treatment • Understand their own beliefs and values, as they relate to issues in child abuse and neglect, as they may influence their professional care

2.3.8 Developmental Pediatric Rotation:

- This is a four-week rotation that is performed during the F1 and F2 years of the Advanced General Pediatric Fellowship.
- The fellow will be supervised by a developmental pediatrician(s) during this rotation.

Trainee's Roles	Goals and Objectives
1 Medical Expert	<ul style="list-style-type: none"> • Pediatric fellows are able to: Accurately assess children with developmental and behavioral disorders • Demonstrate diagnostic and therapeutic skills to effectively and ethically manage a spectrum of problems, which the general pediatrician would be expected to encounter in children with developmental issues • Manage children with developmental and behavioral problems using counseling, therapy, psychopharmacology, education, and other modalities, as appropriate • Provide family-centered and culturally competent care • Make the appropriate referrals to health professionals and other community resources to assist in the assessment and management of developmental and behavioral disorders • Manage developmental issues of different age groups (e.g., infant, pre-school and school-age) • Recognize normal and abnormal developmental domains of childhood as defined by the Denver Developmental Screening Test (e.g., gross motor, fine motor, language, and social development) • Screen a patient's vision and hearing • Screen for developmental problems (e.g., prevention, early identification, counseling) • Understand and interpret psychological and educational testing • Assess psychomotor development (i.e., a neurodevelopmental exam)

- Recognize normal growth, development, and behavior with the provision of anticipatory guidance
- Recognize, diagnose, and manage preliminary...
 - Visual and hearing impairment
 - Cerebral palsy
 - Developmental delay/mental retardation
 - Autism
 - Learning disabilities
 - Hyperactivity/attention problems
 - Dysregulation disorders (e.g., colic)
- Recognize emotional and psychological development, both normal and abnormal (e.g., sexuality, psychiatric disorders that affect development and behavior) psychosocial factors affecting development and behavior
- Describe how abnormal findings for the developmental screening tools would suggest a diagnosis of developmental delay, autism, pervasive developmental delay, and mental retardation
- Define anticipatory guidance and describe how it changes based on the age of the child (e.g., infant, pre-school, and school-age)

Key features may include the following...

- Newborn/infant– the disappearance of primitive reflexes, changes in tone and posture, a cephalocaudal progression of motor milestones during the first year, stranger anxiety
- Toddler/child– separation and autonomy in children between two and three years old, a sequence of language development, the concept of school readiness
- Adolescent– the sequence of physical maturation (e.g., Tanner scales), cognitive development, assessment of psychosocial and emotional development (e.g., HEADSS)
- Describe the typical presentation of common behavioral problems and issues in different age groups

Key features may include the following...

- Newborn/infant– sleep problems, colic
- Toddler– temper tantrums, toilet training, feeding problems
- School-age– enuresis, attention deficit, encopresis, autism
- Adolescent– eating disorders, risk-taking behavior, conduct disorders
- Describe the emotional disturbances or medical conditions that may manifest as alterations in school performance and peer/family relationships
- Distinguish between age-appropriate behavior, inappropriate, or abnormal behavior, and those that suggest severe psychiatric or developmental illness in children of different ages (e.g., head banging, threatening gestures, suicidal inclinations)
- Describe how somatic complaints may represent psychosocial problems (e.g., recurrent abdominal pain, headaches, fatigue, and neurologic complaints)

	<ul style="list-style-type: none"> • Describe the types of situations where pathology in the family (e.g., alcoholism, domestic violence, depression) contributes to childhood behavioral problems • Know the available community resources for children with special needs (e.g., autism and ADHD) by paying attention to multidisciplinary care strategies, anticipatory guidance, and counseling that is specific to special needs populations • Possess knowledge concerning the common diseases' developmental-behavioral problems <p><i>These topics include but are not limited to...</i></p> <ul style="list-style-type: none"> ○ Developmental and behavioral aspects of chronic conditions (e.g., disorders that are chromosomal/genetic, metabolic, neurologic, sensory, endocrine, and cardiac, as well as perinatal conditions) ○ Cognitive/adaptive disabilities ○ Language and learning disorders ○ Motor disabilities and multiple handicaps (e.g., cerebral palsy, myelodysplasia, dystrophies) ○ Autistic spectrum disorders (e.g., autism, Asperger syndrome) ○ Attention Deficit Hyperactivity Disorder (ADHD) ○ Externalizing conditions (e.g., aggressive behavior, conduct disorder, oppositional defiant disorder) ○ Internalizing behaviors and conditions (e.g., anxiety, mood, and obsessive disorders, suicidal behavior) ○ Substance use/abuse (e.g., tobacco, alcohol, illicit drugs) ○ Child abuse and neglect (e.g., physical, sexual, factitious) ○ Somatoform disorders and pain ○ Sleep problems ○ Feeding/eating problems (e.g., obesity, failure to thrive, anorexia, bulimia) ○ Elimination disorders (e.g., encopresis, enuresis) ○ Sexuality (e.g., sexual orientation, gender identity) ○ Atypical behaviors (e.g., tic disorders, self-injurious behavior, repetitive behaviors)
<p style="text-align: center;">2</p> <p>Communicator</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Appropriately communicate with patients, families, and members of the health care team • Elicit an appropriate history from the patient and/or family members • Gather information in a sensitive, non-judgmental manner • Discuss the appropriate information with family and other health professionals • Interview and communicate with an adolescent patient • Communicate with an angry or difficult patient and/or family member • Deliver bad news

	<ul style="list-style-type: none"> • Maintain effective medical records, including the patient's chart, discharge summaries, and instructions sheets • Develop a common understanding concerning issues, problems, and plans with patients, families, colleagues, and other professionals to develop a shared care plan • Initiate multidisciplinary meetings to set goals for the patient
<p>3 Collaborator</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Consult appropriately and effectively with members of the health care team (e.g., physicians, medical genetics, neurologists, psychiatrists, and other health professionals) to coordinate patient care ntribute effectively to other multidisciplinary team activities • Demonstrate the ability to identify, address, and manage, with supervision from the attending staff, conflict situations within the health care team, with community agencies and will be able to understand the importance of navigating family dynamics • Demonstrate expertise in the integration of information to assist children/youth and family with the decision-making process and management to provide them with realistic goals, including care plans and care directives
<p>4 Health Advocate</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Effectively contribute to improving the health of patients and communities • Identify the important determinants of health that affects patients • Recognize and respond to those issues where advocacy is appropriate, especially for patients with socioeconomic limitations • Understand the need for pediatricians to advocate on behalf of vulnerable populations, such as special needs
<p>5 Leader/Manager</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Understand the indications, costs, and benefits regarding laboratory and radiologic investigations • Utilize resources effectively to balance patient care, learning needs, and outside activities • Wisely allocate finite health care resources • Work effectively in a team by utilizing time appropriately, prioritizing patient problems, and managing multiple patients simultaneously • Utilize information technology to optimize patient care, lifelong learning, and other activities • Supervise residents who are in developmental rotation
<p>6 Scholar</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Demonstrate the ability to gain new knowledge and teach others • Critically appraise sources of medical information in order to decide how and when to incorporate it into their practice

	<ul style="list-style-type: none"> • Develop, implement, and monitor a personal strategy to continue education • Facilitate the education of patients, house staff, students, and other health professionals • Contribute to the development of new knowledge • During rotation, perform interactive lecturing and/or writing skills in either a paper or through a presentation
<p>7 Professional</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Deliver care in an ethical and professional manner • Appear in appropriate dress and have a proper attitude • Know conflict resolution strategies • Deliver the highest quality care with integrity, honesty, and compassion • Exhibit appropriate personal and interpersonal professional behaviors • Consistently practice medicine ethically according to a physician's obligations • Respond appropriately in adverse or stressful situations • Understand medico-legal and ethical issues when caring for complex patients (e.g., consent, confidentiality, abuse reporting, advance directives)

2.3.9 Pediatric Sub Speciality Rotation:

- Two rotations are performed during the F2 year of the Advanced General Pediatric Fellowship and each rotation is four weeks long.
- The fellow will be under the direct supervision of the attending subspecialty physicians.

Trainee's Roles	Goals and Objectives
<p>1 Medical Expert</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • To provide fellows exposure to different pediatrics specialties in a hospital setting • To emphasize the importance of recognition, evaluation, and care of advanced pediatric conditions • To emphasize the importance of directing patients to a proper subspecialty • Complete a proper history and physical exam regarding subspecialty needs • Participate in the initial management plan for patients • Medical Knowledge • Create a proper approach and management plan for patients prior to formal presentation to the attending physician • Have basic knowledge of uncommon disease presentations • Master common conditions in subspecialty setting • Differentiate between patients who need subspecialty referral and those who can be managed by a general pediatrics team

	<ul style="list-style-type: none"> • Fellows will be expected to attend the subspecialty teaching activities • Fellows will be expected to see a sufficient number of patients for their skill level • Assume the role of a junior consultant in planning care under the direct supervision of the attending subspecialty physician <p>Core Topics/Skills in this Pediatric Subspecialty:</p> <p>Infectious disease</p> <ul style="list-style-type: none"> • Proper antibiotics choices • Basic microbiology knowledge • Basic precautions for infectious control • Skin and soft tissue infection • Upper and lower respiratory tract infection • Central Nervous System (CNS) infection • Urinary Tract Infection (UTI) • Vaccine • Travel-related infection • Osteoarticular infection • Line-related infection • Infection in immunocompromised patients • Approach to a fever of unknown origin <p>Neurology</p> <ul style="list-style-type: none"> • Electroencephalogram (EEG) and radiological interpretation • Approach to hypotonia • Epilepsy and seizure disorder • Neurocutaneous disorders • Common demyelinating disease <p>Gastroenterology</p> <ul style="list-style-type: none"> • Chronic diarrhea and constipation • Gastrointestinal bleeding • Failure to thrive • Malabsorption disorders • GERD • Celiac disease • Early recognition of biliary atresia • Common functional gastrointestinal disease (e.g., irritable bowel syndrome and cyclic vomiting) <p>Pulmonology</p> <p>Pulmonary function test result interpretation Approach to recurrent pneumonia Advanced bronchial asthma management</p>
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	<p>Approach to foreign body aspiration Common chest radiological interpretation Obstructive sleep apnea Cardiology</p> <ul style="list-style-type: none"> • ECG interpretation and cardiac ECHO basic interpretation • Common congenital heart disease • Management of common cardiac conditions (e.g., endocarditis, cardiomyopathies, rheumatic heart disease) <p>Endocrinology</p> <ul style="list-style-type: none"> • Diabetes mellitus • Ambiguous genitalia • Short and tall stature • Thyroid gland disease • Approach to hypoglycemia • Obesity • Adrenal crises management • Common syndromes with endocrine-related conditions <p>Dermatology</p> <ul style="list-style-type: none"> • Basic approach to skin rashes • Common rashes in pediatrics (e.g., varicella, Henoch-Schoenlein purpura) • Common skin conditions (e.g., warts, tinea infection, hemangioma)
<p style="text-align: center;">2 Communicator</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Demonstrate collaborative practices within the structure of the subspecialty team • Work effectively with patients and family members by using listening and communication skills • Communicate clearly and effectively with consultants by posing purposeful, focused questions about patient care and further management
<p style="text-align: center;">3 Collaborator</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Recognize and respect the roles of other physicians, nursing staff, respiratory therapists, physiotherapists, occupational therapists, nutritionists, pharmacists, social workers, and support staff in the provision of optimal patient care • Demonstrate proficiency in working effectively within the health care team • Appropriately consult specialist physicians to optimize patient care

<p style="text-align: center;">4</p> <p>Health Advocate</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Promote disease prevention with patients and facilitate an institution of preventative measures • Display an advanced understanding of health advocacy at the institutional and community level • Provide education and teaching sessions for families and children to promote safety and a healthy environment for children • Contribute to the development of new knowledge • Act consistently to advance the care of ambulatory patients within the health care system • Consistently link patients to the essential programs and services • Demonstrate an understanding of government funding for therapy and consistently act to ensure patient access to therapies through these programs, as needed • Consistently identify barriers (e.g., financial, social, and psychological) to patient care and develop plans to overcome them • Teach future primary care pediatricians to recognize and address the multifaceted issues that affect children's health
<p style="text-align: center;">5</p> <p>Leader/Manager</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Utilize health care resources in a scientifically, ethically, and economically defensible manner • Be aware of and utilize clinical practice guidelines when appropriate • Demonstrate effective time management skills to achieve a balance between professional and personal responsibilities
<p style="text-align: center;">6</p> <p>Scholar</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Demonstrate practice-based learning and improvement • Appropriately locate and use evidence-based medicine in the diagnosis and treatment of subspecialty pediatric patients • Use information technology (e.g., lab and imaging studies) to support and enhance diagnosis and therapeutic decisions
<p style="text-align: center;">7</p> <p>Professional</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Demonstrate punctuality, attendance, and a work pace that is appropriate to their skill level • Treat all patients, colleagues, family members, and ancillary staff with respect and compassion

2.3.10 Research Rotation:

- This is a four-week rotation performed during the F1 and F2 years of the Advanced General Pediatric Fellowship.
- one rotation is performed during F1.

- one rotation is performed during F2.
- The purpose of this rotation is to expand the fellows' research knowledge base and skills, including the utilization and interpretation of statistical data. It will also promote their understanding of epidemiology.

Trainee's Roles	Goals and Objectives
<p style="text-align: center;">1</p> <p>Medical Expert</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Generate patient-centered clinical questions (and those based on patient cases) to drive knowledge acquisition when designing a research study • Identify personal knowledge deficiencies • Use a standard format to phrase clinical questions (e.g., patient/problem, intervention, comparison intervention, outcome [PICO]) • Perform an efficient literature search to assess what has already been studied • Assess the type of question being asked to identify the study design that would provide the best answer and select the appropriate study design • Identify and efficiently locate the best available information resources to address research project questions • Conduct a database-oriented literature search using Medline, PubMed, or an equivalent method • Use methodological filters to limit searches to articles concerning therapy, diagnosis, or prognosis • Use secondary sources (e.g., Cochrane, Coding Analysis Toolkit, databases, ACP, Journal Club) to efficiently obtain evidence • Use practice guidelines to identify and review the recommended care plans for a variety of common problems that are encountered in PN • Know the indications for Institutional Review Board (IRB) approval, including studies that use patients, patient medical records, and/or other patient-specific data that may compromise confidentiality
<p style="text-align: center;">2</p> <p>Communicator</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Present their project in a grand-rounds, academic, or research-day format at its conclusion • Write a scientific abstract for potential submission to a regional or national research meeting (e.g., the SCFHS, the Saudi Pediatric Society meeting, or resident research days) • Write a scientific paper of their project at its conclusion • Complete final IRB reporting
<p style="text-align: center;">3</p> <p>Collaborator</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Discuss their project with an advisor and appropriate consultants, including statisticians and other specialists regarding research design or scientific knowledge

<p style="text-align: center;">4</p> <p>Health Advocate</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Consider health care delivery, specific disease management, disease screening, or other aspects of health care, as areas to study • Advocate for research to promote the understanding of various disease processes or ways to deliver care • Understand when research is appropriate by considering factors like patient health status or their understanding of the project
<p style="text-align: center;">5</p> <p>Leader/Manager</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Identify research costs • Determine the best methods for performing research within the constraints of their residency and the medical system
<p style="text-align: center;">6</p> <p>Scholar</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Compare their data to previously collected data • Read current literature to substantiate their findings • Determine relevant study applications to patient care and describe how it can be changed accordingly
<p style="text-align: center;">7</p> <p>Professional</p>	<p>Pediatric fellows are able to:</p> <ul style="list-style-type: none"> • Respect the privacy of patients and families (medical and other information) while performing research that involves seeking patient-specific information • Understand the function of an IRB and how it protects patients • Discuss the ethics of their research, including subject recruitment, informed consent, patient privacy, and the role of IRBs • Be honest when reporting data • Present data in an aggregated manner to eliminate specific patient identification • Submit a proposal to the IRB • Complete the IRB Ethics in Research Test

2.4 Continuum Of Learning

The following table illustrates the milestones that the fellow should acquire at the end of every training level in order to qualify to work as a consultant.

Competencies	F1	F2
Medical Expert		
<ul style="list-style-type: none"> Establish and apply basic knowledge, clinical and laboratory skills, and the appropriate attitude to the general pediatric practice. 	<ul style="list-style-type: none"> Obtain and apply fundamental knowledge to provide the appropriate clinical care to core clinical problems in pediatrics. Develop clinical skills, regarding physical examinations and practical procedures that are related to the core presenting problems in pediatrics. Analyze and interpret examination findings and be able to order investigations. Develop the appropriate differential diagnosis and management plan for a patient. Anticipate, prevent, and treat a variety of pediatric diseases and conditions. Acquire the knowledge and skills of related specialties during the different rotations. 	<ul style="list-style-type: none"> Acquire advanced, up to date knowledge that is related to the core clinical problems in pediatrics and explain it to junior fellows and residents. Obtain the ability to judge controversial issues that are related to investigations and patient management concerning certain conditions or diseases. Evaluate and resolve conflicts. Then, appropriately communicate this information with other professionals. Contribute to the improved management of a wide variety of pediatric diseases and conditions through scientific research.
<ul style="list-style-type: none"> Apply scientific principles to your learning and patient care through critical thinking and self-directed, life - long learning. 	<ul style="list-style-type: none"> Evaluate and interpret scientific literature that pertains to a specific topic. Make evidence - based decisions regarding patient care. 	<ul style="list-style-type: none"> Conduct scientific and clinical research.
<ul style="list-style-type: none"> Engage in community service and act as an ambassador for the pediatric profession. 	<ul style="list-style-type: none"> Plan programs to increase awareness for diseases and conditions of interest to the community. 	<ul style="list-style-type: none"> Conduct and evaluate programs that raise awareness for diseases that are of interest to the specialty.
Communicator		
<ul style="list-style-type: none"> Convey effective oral and written information about a case. 	<ul style="list-style-type: none"> Present and discuss the cases effectively at clinical rounds. Effectively communicate with other professionals. 	<ul style="list-style-type: none"> Express diagnostic uncertainty and recommend additional studies as required.

	<ul style="list-style-type: none"> Maintain clear, accurate, and appropriate written or electronic documentation of cases. 	
<ul style="list-style-type: none"> Establish professional therapeutic relationships with patients and their families. 	<ul style="list-style-type: none"> Communicate using a patient-centered approach by encouraging patient trust and autonomy. Recognize and consider the cultural background of patients and how this may affect their decisions. Recognize and respond to a patient's non-verbal behaviors to enhance communication. 	
<ul style="list-style-type: none"> Document and share written/electronic information about a medical encounter to optimize clinical decision-making, patient safety, confidentiality, and privacy. 	<ul style="list-style-type: none"> Accurately document all clinical encounters in a timely and accessible manner. Effectively communicate by using written or electronic medical records. 	
Collaborator		
<ul style="list-style-type: none"> Participate effectively and appropriately in an interprofessional health care team. 	<ul style="list-style-type: none"> Participate effectively in interprofessional team meetings. 	<ul style="list-style-type: none"> Make decisions related to patient care with other colleagues. Demonstrate leadership in a health care team
Health Advocate		
<ul style="list-style-type: none"> Respond to an individual patient's diagnostic and management needs both within and beyond the clinical environment. 	<ul style="list-style-type: none"> Recognize the determinants of a patient's health, including access to care and other resources. Work with patients and families to promote healthy behaviors. 	
<ul style="list-style-type: none"> Respond to the health needs of the communities or populations that are being served. 		<ul style="list-style-type: none"> Improve and modify clinical and laboratory practices to ensure that they meet community needs.

Leader/Manager		
<ul style="list-style-type: none"> Contribute to activities that enhance the effectiveness of health care organizations and systems. 	<ul style="list-style-type: none"> Acquire the basic skills of clinical and laboratory practice by adhering to quality management principles. 	<ul style="list-style-type: none"> Apply quality management principles to improve the delivery of patient care. Demonstrate expertise in clinical and laboratory safety initiatives.
<ul style="list-style-type: none"> Effectively manage one's practice and career. 	<ul style="list-style-type: none"> Set priorities and practice time management skills to integrate one's practice and personal life. Implement processes to ensure personal improvement in one's practice. 	
Scholar		
<ul style="list-style-type: none"> Maintain the continuous enhancement of professional activities through ongoing learning. 	<ul style="list-style-type: none"> Develop and implement a personal learning plan. Conduct personal practice reviews. 	<ul style="list-style-type: none"> Contribute to collaborative learning opportunities. Contribute to the improved management of a wide variety of pediatric diseases and conditions through scientific research.
<ul style="list-style-type: none"> Critically evaluate medical information for the effective integration of evidence into practice. 	<ul style="list-style-type: none"> Critically appraise health-related research and literature to address a clinical or laboratory question. 	<ul style="list-style-type: none"> Integrate evidence into decision-making in one's practice.
<ul style="list-style-type: none"> Contribute to teaching health professionals, residents, students, patients, families, the public, and others. 	<ul style="list-style-type: none"> Recognize the learning principles that are relevant to medical education. Identify the learning needs and outcomes of potential learners. 	<ul style="list-style-type: none"> Participate in teaching residents and other health professionals.
<ul style="list-style-type: none"> Contribute to the development, dissemination, and translation of new knowledge and practices. 	<ul style="list-style-type: none"> Recognize the principles of scientific research and their impact on health care. Identify and apply research regarding ethical principles in one's practice. 	<ul style="list-style-type: none"> Contribute to the work of research teams or programs.

Professional		
<ul style="list-style-type: none"> Demonstrate a commitment to one's patients, profession, and society by applying ethical standards. 	<ul style="list-style-type: none"> Demonstrate integrity, commitment, honesty, respect for diversity, and the maintenance of confidentiality. 	
<ul style="list-style-type: none"> Demonstrate a commitment to one's profession by participating in profession-led regulations. 		<ul style="list-style-type: none"> Contribute to peer assessment processes and standard settings.

2.5 Top Core Conditions

In **Saudi Arabia**, the following list contains the main diseases/conditions that are presented in three major pediatric care sites: outpatient, emergency room, and inpatient. The fellow is expected to face these during specialty training and afterward. Many other conditions/presentations should also be considered during academic teaching and clinical training, as well as covered in everyday practice to varying degrees.

Outpatient Referral	Emergency Visit	Inpatient Admission
Abdominal pain	Bronchial asthma	Bronchial asthma
Anemia	Bronchiolitis	Bronchiolitis
Constipation	Diabetes mellitus	Diabetes mellitus
Failure to thrive	Fever	Gastroenteritis
Heart murmur	Gastroenteritis/dehydration	Jaundice for investigation
Recurrent cough/wheeze	Meningitis	Pneumonia
Rickets/vitamin D deficiency	Neonatal jaundice	Pyrexia of unknown origin
Sickle cell anemia	Neonatal sepsis	Rule out sepsis/meningitis
Skin rash	Pneumonia	Seizure disorders
Short stature	Seizure disorders	Sickle cell anemia
Well-baby check-up and immunization	Sickle cell anemia	UTI

2.6 Expected Level of Competency for Core Specialty Level Problems

Competency Level	F1	F2
Derive a focused history from the patient.		
Perform a detailed physical examination.		
Triage and appropriately prioritize the patients.		
Render immediate/emergency management, as needed.		

Generate the most likely diagnosis and focused differential diagnosis.		
Describe the pathophysiological/anatomical basis of the condition.		
Rationalize, order, and interpret the appropriate investigations		
Recognize secondary complications, adverse events, and severity.		
Counsel patients, families, and caregivers regarding the condition.		
Master self-learning and professional development skills.		
Manage the complexity of the conditions, including psychosocial, financial, and behavioral aspects.		
Teach students, colleagues, and other health care professionals about the condition(s) presented.		
Understand the essentials of epidemiologic and basic scientific research.		

2.7 Procedure Competency, According To The Level Of Training In F1 & F2

PROCEDURES LIST	F1	F2
Lumbar puncture		
ECG reading		
Urinary catheterization		
Thoracentesis/needle decompression		
Chest tube insertion		
Bone marrow aspiration		
Peritoneal tap		
Central line		
Umbilical vein catheterization		
Umbilical artery catheterization		
Intraosseous cannulation		
DC shock		
Resuscitation skills		

OUTCOMES AND COMPETENCIES

Pediatric Advanced Life Support (PALS)		
Venipuncture		
Capillary blood sampling		
Oral/nasal intubation		
Arterial blood gas		
Arterial blood sampling		
SC, IV, IM injections		
Competent		
Proficient		

3. LEARNING OPPORTUNITIES

3.1 General Principles

Trainees will achieve the competencies described in the curriculum through a variety of learning methods. There will be a balance of different modes of learning, from formal teaching programs to experiential learning. A range of core teaching and learning strategies is presented in the following list:

- Lectures
- Tutorials/seminars
- Demonstrations/observation
- Task performance/practice/observation
- Assignments/projects
- Research (e.g., audits)
- Conferences/workshops
- Journal clubs
- Clinics/tailored clinical experiences
- Ward rounds
- Grand rounds
- Committee/multidisciplinary team meetings
- Mentoring
- Coaching
- Simulations (e.g., computer/virtual reality)
- Interactive multimedia (e.g., audio/video conferencing)
- Role-play exercises
- Critical incident analyses
- Case studies
- Online mediated/tutor-monitored discussion groups
- On-call learning

Work-based Learning

Activity	Objectives
Daily Round-based Learning	<ol style="list-style-type: none">1. Present the findings of a focused history and physical examination to the team.2. Document historical and physical examination findings according to accepted formats, including a complete written database, problem list, and a focused S.O.A.P. (i.e., subjective, objective, assessment, and plan) note.3. Develop a patient management plan in consultation with others.4. Present a complete, concise, and informative follow-up for previous patients.
On-Call, Duty-based Learning (OBL)	<ol style="list-style-type: none">1. Elicit a comprehensive history and perform a complete physical examination upon admission. Write the patient's assessment clearly as well as the differential diagnosis of medical problems, and then, initiate the plan of management.2. Discuss the plan of management, including investigations and treatment plans with the seniors.

	<ol style="list-style-type: none"> 3. Communicate the patient care plan to the nurse who is assigned to that patient. 4. Perform the basic procedures that are necessary for the diagnosis and management. 5. Attend consultations within and outside of the department, including emergency consultations. Also, participate in outpatient clinics once or twice weekly.
Clinic-Based Learning (CBL)	<ol style="list-style-type: none"> 1. Elicit a focused history and physical examination under the supervision of the consultant/senior resident. 2. Briefly present the clinical findings to the attending consultant/senior resident. 3. Discuss the differential diagnosis and the management plan with the attending consultant/senior resident. 4. Write the patient's assessment, differential diagnosis, and the management plan. 5. Develop communication skills by observing the attending consultant/senior resident.

Self-directed Learning

Activity	Objectives
	<ol style="list-style-type: none"> 1. Maintain a personal portfolio (e.g., self-assessment, reflective learning, and a personal development plan). 2. Identify a good starting point for your learning task; receive assistance from a colleague or mentor, if needed. 3. Acquire the ability to identify your learning needs and objectives. 4. Gather examples of acceptable learning outcomes. 5. Encourage critical thinking skills. 6. Locate appropriate learning resources. 7. Develop confidence and independence in your learning. 8. Develop a habit of reading journals.

3.2 Universal Topics

These are high-value, interdisciplinary topics that are of the utmost importance to trainees. They must be centrally delivered to ensure that every trainee receives high-quality teaching and develops the essential core knowledge. These topics are common to all specialties with the suggested time of 1.5 hours.

The topics will be delivered in a modular fashion. At the end of each module, there will be an online formative assessment. After all of the topics have been completed, there will be a combined summative assessment that is rich in content and it will be in the form of multiple-choice questions. All trainees must attain at least the minimum competency in the summative assessment. These topics can be assessed in a summative manner, along with the specialty examination.

The following are mandatory modules that need to be completed.

Module 1: Introduction

- 1) Safe drug prescription
- 2) Hospital-acquired infection (HAI)

- 3) Sepsis, systemic inflammatory response syndrome (SIRS), and disseminated intravascular coagulation (DIC)
- 4) Antibiotic stewardship
- 5) Blood transfusion

Safe Drug Prescription

Upon completion of the learning unit, you should be able to:

- Recognize the importance of safe drug prescription in a health care setting
- Describe various adverse drug reactions with examples of commonly prescribed drugs that may cause them
- Apply the principles of drug-drug interactions, drug-disease interactions, and drug-food interactions in common situations
- Apply the principles of prescribing drugs in special situations, like in the case of renal or liver failure
- Apply the principles of prescribing drugs for patient groups who are elderly, pediatric, pregnant, and lactating
- Promote evidence-based, cost-effective prescriptions
- Discuss the ethical and legal frameworks that govern safe-drug prescriptions in Saudi Arabia

HAI

Upon completion of the learning unit, you should be able to:

- Discuss the epidemiology of HAIs, especially in reference to Saudi Arabia
- Recognize HAIs as a major emerging threat in health care
- Identify the common sources of HAIs and the surrounding circumstances
- Describe the risk factors for common HAIs, such as ventilator-associated pneumonia, methicillin-resistant staphylococcus aureus, central line-associated bloodstream infections, and vancomycin-resistant enterococcus
- Identify the role of health care workers in preventing HAIs
- Determine the appropriate pharmacological (e.g., selected antibiotics) and nonpharmacological (e.g., removal of indwelling catheters) measures in treating HAIs
- Propose a plan to prevent HAIs in the workplace

Sepsis, SIRS, DIC

Upon completion of the learning unit, you should be able to:

- Explain the pathogenesis of sepsis, SIRS, and DIC
- Identify patient-related and nonpatient-related predisposing factors of sepsis, SIRS, and DIC
- Recognize patients who are at risk of developing sepsis, SIRS, and DIC
- Describe the complications of sepsis, SIRS, and DIC
- Apply the principles of managing patients with sepsis, SIRS, and DIC
- Describe the prognosis of sepsis, SIRS, and DIC

Antibiotic Stewardship

Upon completion of the learning unit, you should be able to:

- Recognize antibiotic resistance as one of the most pressing global public health threats
- Describe the mechanisms of antibiotic resistance
- Determine appropriate and inappropriate uses for antibiotics
- Develop a plan for safe, proper antibiotic use that includes the correct indications, duration, types, and its discontinuation
- Know the local guidelines for preventing antibiotic resistance

Blood Transfusion

Upon completion of the learning unit, you should be able to:

- Review the different components of blood products that are available for transfusion
- Recognize the indications and contraindications of a blood product transfusion
- Discuss the benefits and risks of transfusions, as well as the alternatives
- Obtain consent for specific blood product transfusions
- Perform the necessary steps for a safe transfusion
- Know the special precautions and necessary procedures for massive transfusions
- Recognize transfusion-associated reactions and provide immediate management

Module 2: Cancer

- 1) Principles of cancer management
- 2) Side effects of chemotherapy and radiation therapy
- 3) Oncological emergencies
- 4) Cancer prevention
- 5) Surveillance and follow-up of cancer patients

Principles of Cancer Management

Upon completion of the learning unit, you should be able to:

- Discuss the basic principles of cancer staging and grading
- Describe the important (i.e., the frequent, life-threatening, and/or organ-threatening) side effects of common chemotherapy drugs
- Explain the principles of monitoring the side effects of patients undergoing chemotherapy
- Describe the pharmacological and nonpharmacological measures that are available to ameliorate the side effects of commonly prescribed chemotherapy drugs
- Describe the important (i.e., the common and life-threatening) side effects of radiation therapy
- Describe the pharmacological and nonpharmacological measures available to ameliorate the side effects of radiotherapy

Oncological Emergencies

Upon completion of the learning unit, you should be able to:

- Recognize and enumerate the important oncological emergencies encountered in both hospital and ambulatory settings
- Discuss the pathogenesis of important oncological emergencies
- Institute immediate measures when treating patients with oncological emergencies
- Counsel patients in recognizing and preventing oncological emergencies in an anticipatory manner

Cancer Prevention

Upon completion of the learning unit, you should be able to:

- Conclude that many major cancers are preventable
- Identify major preventable measures, like smoking prevention and other lifestyle modifications
- Recognize preventable cancers
- Discuss the major cancer prevention strategies at both the individual and national levels
- Use a proactive manner to counsel patients and families regarding cancer prevention measures, including screening

Surveillance and Follow-up of Cancer Patients

Upon completion of the learning unit, you should be able to:

- Describe surveillance and follow-up principles for patients with cancer
- Enumerate the surveillance and follow-up plans for common forms of cancer
- Describe the role of primary care physicians, family physicians, and others in the surveillance and follow-up of cancer patients
- Liaise with oncologists to provide surveillance and follow-up for patients with cancer

Module 3: Acute Care

- 1) Preoperative assessment
- 2) Postoperative care
- 3) Acute pain management
- 4) Chronic pain management
- 5) Management of fluid in hospitalized patients
- 6) Management of acid-base and electrolyte imbalances

Preoperative Assessment

Upon completion of the learning unit, you should be able to:

- Describe the basic principles of a preoperative assessment
- Perform a preoperative assessment for uncomplicated patients with a special emphasis on general health, cardiorespiratory, medications, medical device assessments, drug allergies, and pain relief requirements
- Categorize patients according to risk

Postoperative Care

Upon completion of the learning unit, you should be able to:

- Devise a postoperative care plan that includes monitoring vital signs, pain management, fluid management, medication, and laboratory investigations
- Properly hand over patients to the appropriate facilities
- Describe the process of postoperative recovery
- Identify common postoperative complications
- Monitor patients for possible postoperative complications
- Institute the immediate management of postoperative complications

Acute Pain Management

Upon completion of the learning unit, you should be able to:

- Review the physiological basis of pain perception
- Proactively identify patients who may be in acute pain
- Assess patients who are experiencing acute pain
- Apply various pharmacological and nonpharmacological modalities for acute pain management
- Provide adequate pain relief for uncomplicated patients with acute pain
- Identify and refer patients experiencing acute pain who may benefit from specialized pain services

Chronic Pain Management

Upon completion of the learning unit, you should be able to:

- Review the biopsychosocial and physiological bases of chronic pain perception
- Discuss the various pharmacological and nonpharmacological options that are available for chronic pain management

- Provide adequate pain relief for uncomplicated patients with chronic pain
- Identify and refer patients experiencing chronic pain who may benefit from specialized pain services

Management of Fluid in Hospitalized Patients

Upon completion of the learning unit, you should be able to:

- Review the physiological basis of water balance in the body
- Recognize patients who are dehydrated or overhydrated
- Order fluid therapy (oral and intravenous) for hospitalized patients
- Monitor the fluid status of a patient and their response to therapy via history, physical examination, and selected laboratory investigations

Management of Acid-base and Electrolyte Imbalances

Upon completion of the learning unit, you should be able to:

- Review the physiological basis of electrolyte and acid-base balance in the body
- Identify diseases and conditions that are associated with or likely to cause acid-base and electrolyte imbalances
- Correct electrolyte and acid-base imbalances while performing careful calculations, checks, and other safety measures
- Monitor a patient's response to therapy via history, physical examination, and selected laboratory investigations

Module 4: Ethics and Health Care

- 1) Occupational hazards for health care workers (HCWs)
- 2) Evidence-based approach to smoking cessation
- 3) Patient advocacy
- 4) Ethical issues: transplantation, organ harvesting, and withdrawal of care
- 5) Ethical issues: treatment refusal and patient autonomy
- 6) The role of doctors in death and dying

HCWs

Upon completion of the learning unit, you should be able to:

- Recognize common sources of and risk factors for occupational hazards concerning HCWs
- Describe common occupational hazards in the workplace
- Develop familiarity with the legal and regulatory frameworks that govern occupational hazards concerning HCWs
- Develop a proactive attitude in the promotion of workplace safety
- Protect yourself and colleagues against potential occupational hazards in the workplace

Evidence-based Approach to Smoking Cessation

Upon completion of the learning unit, you should be able to:

- Describe the epidemiology of smoking and tobacco use in Saudi Arabia
- Review the effects of smoking on both smokers and their family
- Use pharmacological and nonpharmacological measures to effectively treat tobacco use and dependence, including special population groups, such as pregnant women, patients with psychiatric disorders, and adolescents

Patient Advocacy

Upon completion of the learning unit, you should be able to:

- Define patient advocacy and recognize it as a core value that governs medical practice
- Describe the role of patient advocates

- Develop a positive attitude regarding patient advocacy
- Be a patient advocate in conflict situations
- Be familiar with local and national groups for patient advocacy

Ethical Issues: Transplantation, Organ Harvesting, and Withdrawal of Care

Upon completion of the learning unit, you should be able to:

- Apply key ethical and religious principles that govern organ transplantation and withdrawal of care
- Be familiar with the legal and regulatory guidelines regarding organ transplantation and withdrawal of care
- Counsel patients and families while keeping in mind their ethical and religious principles, when applicable
- Guide patients and families in making informed decisions

Ethical Issues: Treatment Refusal and Patient Autonomy

Upon completion of the learning unit, you should be able to:

- Predict situations when patients and/or family members are likely to refuse the prescribed treatment
- Describe the “rational adult” concept in the context of patient autonomy and treatment refusal
- Analyze key ethical, moral, and regulatory dilemmas concerning treatment refusal
- Recognize the importance of patient autonomy in the decision-making process
- Counsel patients and/or family members who refuse the medical treatment that is in the patient’s best interest

Role of Doctors in Death and Dying

Upon completion of the learning unit, you should be able to:

- Recognize the important role a doctor plays during the dying process
- Provide emotional and physical care to dying patients and their families
- Provide appropriate pain management for dying patients
- Identify suitable patients and refer them to a palliative care service

3.3 Core Specialty Topics

Core specialty topics are important pediatric clinical problems and they are interactive, case-based discussions. They include workshops and simulations to help develop the necessary skills for core procedures.

3.3.1 Examples of Core Specialty Topics: Case Discussions and Interactive Lectures

Topics	Learning Outcomes
Anemia	<ol style="list-style-type: none"> 1. Differentiate between the different causes of anemia. 2. Discuss the investigations that may clarify the diagnosis. 3. Recognize the predisposing factors and consequences of iron deficiency anemia and discuss how to manage it. 4. Discuss the hereditary basis and clinical features of sickle cell anemia and thalassemia and how to screen for it. 5. Recognize the potential consequences of hemolytic anemia. 6. Recognize and initiate the management of a sickle cell crisis.

<p>Approach to bleeding disorders</p>	<ol style="list-style-type: none"> 1. Differentiate between the different causes of purpura and bruising. 2. Recognize the features in a presentation that suggest a serious pathology or child abuse. 3. Discuss how to explain Henoch - Schoenlein purpura and idiopathic thrombocytopenia (ITP) to parents, including when precautions and treatment are necessary. 4. Define how to manage acute bleeding in hemophilia and Von Willebrand's disease. 5. Recognize the causes and presentations of hemorrhagic disease of the newborn. 6. Discuss the hereditary basis of hemophilia and other coagulation disorders. 7. Recognize and treat hemarthrosis in a patient with hemophilia. With appropriate advice, be aware of the need to treat it urgently.
<p>Approach to a febrile seizure</p>	<ol style="list-style-type: none"> 1. Define febrile seizures. 2. Discuss the management of this condition. 3. Determine the risk of recurrence and subsequent epilepsy risk. 4. Describe the genetic predisposition.
<p>Approach to a limping child</p>	<ol style="list-style-type: none"> 1. Formulate differential diagnosis of a limp at different ages and clinical presentations. 2. Determine when to refer a patient to gain a specialist opinion, and when to involve a pediatric rheumatologist. 3. Discuss the clinical features of benign hypermobility and non benign hypermobility (e.g., Marfan syndrome). 4. Determine joint laxity in an assessment. 5. Distinguish between inflammatory and noninflammatory conditions and recognize features that suggest serious pathology.
<p>Approach to a patient with hematuria</p>	<ol style="list-style-type: none"> 1. Elicit the different signs of hematuria. 2. Discuss the relevant investigations. 3. Recognize the indications for renal biopsy. 4. Recognize features in the presentation that suggest a serious or unusual pathology.
<p>Child abuse</p>	<ol style="list-style-type: none"> 1. Determine how to assess child abuse regarding patient history, developmental stages, and abilities. 2. Know when to initiate investigations if child abuse is a possibility, such as a skeletal survey, as appropriate. 3. Recognize the possibility of being able to date bruising. 4. Differentiate between new and old fractures on an X - ray. 5. Know how to initiate a multidisciplinary investigation with a more experienced colleague.
<p>Child safety and environmental hazards</p>	<ol style="list-style-type: none"> 1. Discuss promoting the safety of children with disabilities through anticipatory guidance, treatment, counseling, and referral. 2. Determine factors that may contribute to an increased risk of injury. 3. Recognize unintentional injury in children with disabilities. 4. Discuss maltreatment. This entails the provision of anticipatory guidance regarding the increased risk of maltreatment in children with disabilities.

Child with trauma and head trauma	<ol style="list-style-type: none"> 1. Perform the appropriate investigations when child abuse is a possibility, such as a skeletal survey, as appropriate. 2. Formulate the appropriate investigations. 3. Differentiate between new and old fractures on an x - ray. 4. Initiate a multidisciplinary investigation with a more experienced colleague. 5. Perform fundoscopy and recognize retinal hemorrhage.
Chronic diarrhea	<ol style="list-style-type: none"> 1. Discuss the differential diagnosis of chronic diarrhea. 2. Assess the child's nutritional status. 3. Plot and interpret growth charts. 4. Determine when to initiate investigations, and how to manage common causes.
Cyanotic child	<ol style="list-style-type: none"> 1. Define the anatomy of the common causes of cyanotic heart disease, the normal fetal circulation, and transitional changes after birth. 2. Differentiate between cardiac and noncardiac causes of cyanosis. 3. Recognize when treatment is urgent and initiate emergency management. 4. Determine the other noncardiac causes and discuss how to approach them. 5. Describe clinical signs and investigations accurately with a cardiologist.
Developmental delay	<ol style="list-style-type: none"> 1. Differentiate between the causes of neurodevelopmental regression and know how to access an expert's assistance. 2. Understand the implications of developmental delay. 3. how to assess development. 4. Discuss the current theories about the pathophysiology of cerebral palsy 5. Understand the complications of cerebral palsy, how to manage it, and what the role of a multidisciplinary team is. 6. Identify common secondary disabilities. 7. Recognize common causes of disordered development, manage simple problems, and appropriately refer complex difficulties to a specialist for further investigation and assessment.
Diabetic ketoacidosis	<ol style="list-style-type: none"> 1. Discuss the pathophysiology of diabetic ketoacidosis. 2. Recognize potential complications, including cerebral edema. 3. Discuss how to treat and monitor the progress of diabetic ketoacidosis. 4. Recognize the clinical features of diabetic ketoacidosis.
Dysmorphic child	<ol style="list-style-type: none"> 1. Recognize the scientific basis of chromosomal disorders and inheritance and basis of molecular genetics. 2. Learn how to construct a family tree and interpret patterns of inheritance. 3. Differentiate between the features of some common chromosome disorders and identify associated anomalies. 4. Describe the features of a baby or child associated with common malformation or deformation syndromes. 5. Recognize the risks of and cultural issues posed by consanguinity. 6. Discuss how to give appropriate information to parents while awaiting investigations and opinions from colleagues.

Failure to thrive	<ol style="list-style-type: none"> 1. Differentiate between the different causes of malnutrition, including organic and non - organic causes. 2. Discuss the principles of enteral and parenteral nutrition support. 3. Know how to assess a patient's nutritional status. 4. Understand when to initiate investigations in order to establish a diagnosis, detect nutritional deficiencies, and initiate management with dietetic support. 5. Determine the causes and consequences of malabsorption, including celiac disease and cystic fibrosis. 6. Discuss the principles of treatment concerning the different types of malabsorption. 7. Recognize the role of the dietician and liaise appropriately.
Fever of unknown origin (FUO)	<ol style="list-style-type: none"> 1. Differentiate between the different causes of a fever of unknown origin. 2. Recognize features in the presentation that suggest a serious or unusual pathology. 3. Determine how to conduct investigations in order to establish the cause.
Generalized body edema	<ol style="list-style-type: none"> 1. Differentiate between the causes of signs associated with generalized body edema and determine the proper investigations. 2. Recognize features in the presentation that suggest a serious or unusual pathology. 3. Discuss how to manage the most serious cause. 4. Recognize when to consult cardiology, gastroenterology, and nephrology specialists.
Immunization	<ol style="list-style-type: none"> 1. Differentiate between passive and active immunization. 2. Discuss the indications, contraindications, and complications of using immunoglobulin. 3. Recognize the principles and the rationale behind the national immunization policy for children in Saudi Arabia. 4. Discuss the indications, contraindications, and complications of routine childhood immunizations. 5. Determine how to immunize a child with special conditions, an illness, or if they are missing a vaccine. 6. Discuss when to use an extra vaccine for a child with a special condition, such as Sickle Cell Disease.
Lower respiratory tract infection (pneumonia and bronchiolitis)	<ol style="list-style-type: none"> 1. Discuss the causes of respiratory tract infections and recurrent infections. 2. Recognize the indicators of severity and determine when patients require intensive care. 3. Discuss how to manage these infections. 4. Recognize complications, such as empyema, and manage them appropriately.
Lymphadenopathy	<ol style="list-style-type: none"> 1. Recognize the different groups of lymph nodes. 2. Discuss the differential diagnosis. 3. Differentiate between acute and chronic inflammation of nodes.

Management of asthma	<ol style="list-style-type: none"> 1. Assess the severity of an asthma attack. 2. Discuss the guidelines for managing asthma. 3. Recognize the patterns of asthma and contributing factors. 4. Determine the complications of long term use for asthma medication. 5. Institute an age appropriate, individualized management plan for asthma. 6. Teach children how to use a peak flow meter and diary. 7. Teach and assess inhaler techniques.
Obesity	<ol style="list-style-type: none"> 1. Define the causes of obesity. 2. Recognize the long-term complications of obesity. 3. Discuss interventional strategies that are involved in weight reduction. 4. Calculate and interpret body mass index charts. 5. Recognize features in the presentation that suggest a serious pathology.
Recurrent abdominal pain	<ol style="list-style-type: none"> 1. Discuss the different causes of recurrent abdominal pain, including functional causes. 2. Identify the different causes of acute abdominal pain. 3. Recognize the conditions that require urgent intervention, such as intussusception. 4. Recognize the possibility of acute appendicitis in very young children. 5. Recognize signs of pain in an infant or small child.
Recurrent joint swelling	<ol style="list-style-type: none"> 1. Describe the different causes of joint swelling at single and multiple sites. 2. Recognize when to refer a patient to a specialist for recurrent joint swelling. 3. Identify joint swelling and elicit an abnormal range of joint movement during the clinical examination. 4. Perform a musculoskeletal assessment, including a screening examination and an approach to a more detailed examination.
Recurrent UTI	<ol style="list-style-type: none"> 1. Discuss the causes of a UTI as well as its recurrence. 2. Identify indicators of severity for a UTI. 3. Recognize patients that require intensive care. 4. Discuss how to manage these infections. 5. Recognize complications (e.g., acute renal injury) and manage appropriately.
Rickets	<ol style="list-style-type: none"> 1. Differentiate between nutritional rickets and other causes of rickets. 2. Recognize the symptoms and signs of vitamin D deficiency. 3. Determine how to initiate an investigation for Rickets, and how to approach the most common causes. 4. Identify when to refer a patient to a specialist for Rickets.
Seizure disorder	<ol style="list-style-type: none"> 1. Identify the common causes of seizures in infants and children. 2. Discuss common epileptic syndromes. 3. Recognize the principles of initial and continuing anticonvulsant therapy in babies and children, and how to treat a status epilepticus.

	<ol style="list-style-type: none"> Differentiate between epilepsy and other behavior problems. Recognize the principles of an EEG and neuroimaging in an investigation. Educate the parents about their child's safety.
Skin rash	<ol style="list-style-type: none"> Accurately describe a skin rash. Recognize when to refer to common birthmarks and hemangiomas. Differentiate and recognize the cutaneous and mucosal manifestations of a systemic disease. Recognize the serious nature of some skin disorders or their associated conditions. Discuss the different potencies of topical steroids and their side effects. Identify the indications for a skin biopsy and the procedure involved.
Short stature	<ol style="list-style-type: none"> Discuss the different causes of a short stature. Determine when a short stature needs to be investigated. Describe the rationale behind the baseline and subsequent investigations. Explain to parents and patients the non-serious causes of short stature, such as genetic short stature, constitutional delay, and hypothyroidism. Recognize the need to rule out Turner's syndrome as a cause of short stature in girls.
Speech and language delay, including hearing loss	<ol style="list-style-type: none"> Discuss the common causes of speech delay. Discuss the importance of hearing assessments in children. Determine if a multidisciplinary investigation and therapy is appropriate for those with disorders that are more complex. Recognize the risk factors for a sensorineural hearing impairment. Recognize when a specialist referral is needed.
Stridor	<ol style="list-style-type: none"> Detect the potentially life threatening nature of this condition. Differentiate between allergic and infective causes, such as epiglottitis, laryngotracheitis, retropharyngeal abscess, and a foreign body. Recognize when to request help from a senior colleague. Discuss how to manage this condition. Discuss the causes of chronic stridor. Recognize when and how to investigate Stridor.
Wheezing in infants	<ol style="list-style-type: none"> Define wheezing. Differentiate between the causes of wheezing. Discuss the approach to take regarding a wheezing child. Recognize the risk of asthma.

The Advanced General Pediatric fellow should learn the Emergency Medicine approach to:

- Basic airway management
- Pediatric fever
- Abdominal pain
- Shortness of breath
- Wound care
- Fractures and splinting, including the use of radiology services
- Burns

8. Toxicology
9. Rashes
10. Common pediatric medical emergencies (e.g. DKA, Status asthmatics, Status epileptics)
11. Presentation of physical/sexual child abuse

Core Topics/Skills in a pediatric subspecialty:

Infectious diseases

1. Proper antibiotic choices
2. Basic microbiology knowledge
3. Infectious control basic precautions
4. Skin and soft tissue infections
5. Upper and lower respiratory tract infections
6. CNS infections
7. UTI
8. Vaccines
9. Travel-related infections
10. Osteoarticular infections
11. Line-related infections
12. Infections in immunocompromised patients
13. Approach to a fever of unknown origin

Neurology

1. EEG and radiological interpretation
2. Approach to hypotonia
3. Epilepsy and seizure disorders
4. Neurocutaneous disorders
5. Common demyelinating disease

Gastroenterology

1. Chronic diarrhea and constipation
2. Gastrointestinal bleeding
3. Failure to thrive
4. Malabsorption disorders
5. Gastroesophageal reflux disease
6. Celiac disease
7. Early recognition of biliary atresia
8. Common functional gastrointestinal disease (e.g., irritable bowel syndrome and cyclic Vomiting)

Pulmonology

1. Pulmonary function test result interpretation
2. Approach to recurrent pneumonia
3. Advanced bronchial asthma management
4. Approach to a foreign body aspiration
5. Common chest radiological interpretation
6. Obstructive sleep apnea

Cardiology

1. ECG interpretation and cardiac echocardiogram basic interpretation
2. Common congenital heart disease

- Management of common cardiac conditions (e.g. endocarditis, cardiomyopathies, rheumatic heart disease)

Endocrinology

- Diabetes mellitus
- Ambiguous genitalia
- Short and tall stature
- Thyroid gland disease
- Approach to hypoglycemia
- Obesity
- Adrenal crises management
- Common syndromes with endocrine-related conditions

Dermatology

- Basic approach to skin rashes
- Common rashes in pediatrics (e.g. varicella, Henoch-Schoenlein purpura)
- Common skin conditions (warts, tinea infection, hemangioma)

3.4 Trainee-Selected Topics

Trainees develop a list of topics and all of them need to be approved by the local education committee.

Examples of trainee topics include:

- Communication skills
- Decision-making
- Evidence-based medicine
- Clinical teaching and learning strategies
- Breaking bad news
- Medical ethics, malpractices, and patient safety
- Publication skills
- Objective Structured Clinical Exam (OSCE) preparation
- Medication safety practices
- Child safety and environmental hazards
- Stress management
- Critical appraisal and how to create a journal club
- How to write a research proposal

3.5 Education Activities

Weekly schedule example of formal educational activities:

Time	Sunday	Monday	Tuesday	Wednesday	Thursday
7:30-8:15	Morning report	Grand rounds	Case conference	Morning report	Morning report
13:00-14:00		Journal club	Lecture presentation (case, topic, or invited speaker)		All staff Patient round

LEARNING OPPORTUNITIES

Grand rounds/staff or guest lectures	<ol style="list-style-type: none"> 1. Increase medical knowledge and skills 2. Understand and apply current practice guidelines 3. Research and describe the latest advances in the field 4. Identify and explain areas of controversy in the field
Case presentation	<ol style="list-style-type: none"> 1. Present a focused history and physical examination 2. Formulate a list of all the identified problems 3. Develop a proper and informative differential diagnosis 4. Formulate and discuss a treatment plan 5. Improve case presentation skills by receiving proper feedback on presentation
Journal club/evidence-based medicine	<ol style="list-style-type: none"> 1. Critically appraise the literature 2. Promote continuing professional development 3. Understand the basis of hypothesis testing 4. Keep up to date with the literature 5. Ensure that professional practice is evidence-based 6. Learn and practice critical appraisal skills 7. Provide an enjoyable educational and social occasion 8. Understand the sources of bias 9. Understand how the results of a study can be used in clinical practice 10. Understand the basis of diagnostic testing (e.g., prevalence, sensitivity, specificity, positive and negative predictive values, likelihood ratios) 11. Develop the necessary skills to critically review published data 12. Learn to interpret and appropriately apply published data 13. Develop the necessary skills for lifelong learning
General pediatrics topics	<ol style="list-style-type: none"> 1. Review common conditions in the practice
Morbidity and mortality report	<ol style="list-style-type: none"> 1. Identify areas of improvement for clinicians involved in case management 2. Prevent errors that lead to complications 3. Modify behavior and judgment based on previous experience 4. Identify system issues that may affect the general pediatric patient care, such as outdated policies and changes in patient identification procedures
Morning report	<ol style="list-style-type: none"> 1. Educate all attending staff 2. Monitor general pediatric patient care 3. Review management decisions and their outcomes 4. In a scientific and informative fashion, demonstrate competence in a short presentation regarding all of the admitted general pediatric patients 5. Generate an appropriate differential diagnosis and proper management plan

Research methodology and preparation	<ol style="list-style-type: none">1. Develop basic knowledge in research design (e.g., study design, abstract writing skills, and presentation skills)2. Gain competence in literature reviews, data syntheses, data analyses, and interpretations3. Develop a viable research proposal with the help of a faculty mentor4. Conduct research on a topic that is broadly related to pediatric or pediatric subspecialties5. Communicate research findings through oral presentations, poster presentations, abstract preparation, or an article publication
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4. ASSESSMENT OF TRAINEES

4.1 Assessment Purpose

- Support learning
- Develop professional growth
- Monitor progress
- Competency judgment and certification
- Evaluate the quality of the training program

4.2 General Principles

- Judgment should be based on the holistic profiling of a trainee rather than individual traits or instruments
- An assessment should be continuous
- The trainee and faculty must meet to review their portfolio and logbook once every two months and at the end of a rotation
- An assessment should be strongly linked to the curriculum and content
- Follow the SCFHS policy for continuous assessment and exams at the end of the year, including final exams

4.3 Evaluation and Promotion

- The assessment of learners is conducted in accordance with SCFHS training and examination rules and regulations.
- The assessment is divided into two parts:
- Formative assessment (i.e., a continuous assessment process during the training period)
- Summative assessment (i.e., an assessment at the end of the program)

The learners undergo a formative and summative assessment. The training centers execute a formative assessment, while the SCFHS conducts a summative assessment. The learners are required to sit for the written promotion examination in order to advance to the second year. The learner is required to pass all of the continuous assessment tools that are stated by the specialty's scientific committee to fulfill the training requirements of the given calendar year. The summative examination includes a written assessment to demonstrate knowledge and a clinical OSCE to validate clinical skills.

Refer to the executive policy on continuous assessment and annual promotion for further detail. (<https://www.scfhs.org.sa/en/examinations/Regulations/Assessment%20Conduct%20Regulation.s.pdf>)

4.3.1 Formative/Continuous Assessment

The formative/continuous assessment enables those who are involved in the training process (i.e., preceptors) to provide objective feedback. It also involves the evaluation of interactive training activities, such as case studies, seminars, and research projects. A report must be submitted to the Regional Training Supervisory Committee of the Specialty for review, which includes a follow-up of the learners' progress. The formative assessment shows the learners' performance regarding their knowledge, attitude, and skills during the training period. The learners must pass as "satisfactory" in all of the assessments.

Training level	Domain	Assessment Tools
F1	Knowledge	Academic activities / Written exam at the end of the year
	Skills	Research / Community volunteering
	Attitude	In-training Evaluation Report (ITER) Mini-Clinical Evaluation Exercise (Mini-CEX)
F2	Knowledge	Academic activities
	Skills	Research
	Attitude	ITER Mini-CEX

4.3.1.1 Academic Activities

This component of the formative assessment aims to evaluate the fellow's capacity to recall, understand, and demonstrate the ability to deliver the learning contents of the "Academic Activities" (See *Appendix*).

4.3.1.2 ITER

This component of the formative assessment aims to evaluate the fellow's attitudes and behaviors toward achieving excellence in patient care during a specific timeframe (See *Appendix*).

4.3.1.3 Volunteering

Objective:

Volunteering activities are required during the family and community rotations to promote health and wellbeing in the community.

Process:

- Work through recognized volunteering institutions (see examples below).
- Acquire the pre-approval of the clinical supervisor and the program director (See *Appendix*).
- Provide documents of evidence (e.g., letters, certificates) as a prerequisite to being issued a training completion certificate.

Volunteer examples:

- Health education campaigns for the public
- Vaccination campaigns
- Associations for family/children with special needs
- Health promotion campaigns
- Health prevention campaigns
- Other institutions related to health care

4.3.1.4 Research Activity

evidence based medicine and research methodology activities should be incorporated in the program's academic schedule from F1 to F2. Fellows are required to submit a full research proposal by the end of F2.

The advanced general pediatric program has the right to raise the research requirement for the submission of a full research thesis, which should be submitted before finishing F2. If these requirements are increased, there is a four-week maximum of elective, research rotations that

can be provided to the fellow in order to complete their manuscripts. When a fellow wants to conduct a full research thesis, their requests should be encouraged and supported.

Objectives:

- Know the principles and clinical implications of EBM
- Extrapolate results from research and apply these to the clinical practice
- Know the fundamentals of research types and research methodology
- Write a proposal for medical research
- Plan and execute medical research
- Critically evaluate research

Course Content:

Evidence-based Medicine	Research
<ul style="list-style-type: none"> • Principles of evidence-based health practice (EBHP) • Research skills, information mastery, and critical appraisal skills for different types of evidence 	<ul style="list-style-type: none"> • Select an appropriate research project in relation to general pediatrics
<ul style="list-style-type: none"> • Statistics of EBHP • Knowledge translation • Applying evidence and changing one's own practice 	<ul style="list-style-type: none"> • Prepare a background statement concerning the selected problem
	<ul style="list-style-type: none"> • for study and writing the research protocol • Develop research objectives and hypotheses • Prepare a literature review that is relevant to the problem
	<ul style="list-style-type: none"> • Develop a research design and methodology
	<ul style="list-style-type: none"> • Write a protocol/proposal for medical research

Research Supervisors

- Supervisors should have sufficient experience in research or publications. They should also, preferably, have published papers in peer-reviewed journals.
- Supervisors should hold a Saudi Board or an equivalent certificate in general pediatrics.

The supervisor is responsible for:

- Reviewing and approving the research proposal and timeline created by the fellow
- Regularly supervising the fellow, according to the timeline
- Documenting all supervision sessions in the Research Progress Form (See *Appendix*)
- Reporting all supervision sessions to the research committee
- Reviewing and approving the final copy of the proposal and manuscript

- Signing the research submission letter and stating that the research was conducted under their supervision and guidance
- Participating in the evaluation of proposals and research papers submitted to the research committee (if required)
- Attending the annual research day

The Role of the Fellow

The fellow is responsible for preparing and conducting research within the time frame specified by the program. They also need to follow-up with their supervisor and departmental research unit. He/she should report any difficulties encountered in the program to either the director or his deputy.

- **Selecting the Research Topic**

Select a research topic with the guidance of a supervisor.

- **Proposal**

Prepare, finalize, and submit the proposal to a supervisor for approval.

- **Conducting Research and Writing the Manuscript**

Conduct the fieldwork (e.g., data collection and data entry) and perform all other research tasks

(e.g., data entry, analysis, and manuscript writing) with the help and guidance of a supervisor/research unit. Then, submit the final draft of the research on time.

- **Budget**

Ensure that the research expenses are reimbursed.

Topic Selection

In selecting a research topic, the research committee, supervisors, and residents should consider the following important (FINER) points:

- **F- Feasible**

Is the research question answerable? Do you have access to all of the materials that you will need to conduct the study? Do you have access to enough participants? Will you have sufficient time and money? Do you have the expertise to do this study or can you collaborate with someone who does?

- **I- Interesting**

Is the research question interesting to both the investigator and others?

- **N- Novel**

Has this study been performed before? Does it add to the current body of medical knowledge?

- **E- Ethical**

Can the study be performed in a way that does not subject participants to excessive risks? Will an institutional review board approve the study?

- **R- Relevant**

Will this research further medical science? Will the results change clinical practice, health policy, or encourage further research?

4.3.1.5 Mini-CEX

Competencies demonstrated during the Mini-CEX:

1- Medical interviewing skills

- Facilitate the account of events for patients
- Effectively use questions and directions to obtain accurate, adequate information that is needed
- Respond appropriately to affective, non-verbal cues

2- Physical examination skills

- Follow an efficient, logical sequence
- Balance the screening and diagnostic steps for problems
- Inform patients
- Be modest and sensitive to the comfort of patients

3- Professionalism

- Demonstrate respect, compassion, and empathy
- Establish trust
- Attend to the patients' needs for comfort, modesty, confidentiality, and information

4- Clinical judgment

- Selectively order and perform the appropriate diagnostic studies
- the risks and benefits

5- Counseling skills

- Explain the rationale for a test/treatment
- Obtain a patient's consent
- Educate and counsel patients regarding the proper management

6- Organization/efficiency

- Prioritize so that your practice is timely and succinct

7- Overall clinical competence

- Demonstrate good judgment, synthesis, caring, effectiveness, and efficiency

Mini-CEX (instructions for fellows)

The mini-CEX assesses clinical skills, attitudes, and behaviors in clinical care settings.

How the Mini-CEX works

The mini-CEX provides a fifteen-minute snapshot of how fellows interact with patients in clinical care settings.

Preparing for the Mini-CEX

Each Mini-CEX should represent a different clinical problem. Fellows should be able to draw samples from a wide range of problem groups by the end of the fellowship training during the first and second years.

Conducting the Mini-CEX

Depending on the center arrangements, the clinical mentor, trainer, or program director may oversee the Mini-CEX. A staff grade doctor, nurse practitioner, clinical nurse specialist, experienced specialty registrar, or consultant may also observe the Mini-CEX. The observer

should not be a peer, fellow general practitioner trainee, or specialty trainee at a similar training stage.

Using Mini-CEX feedback

The observer will provide immediate feedback, which will be rated and recorded in a fellow's training profile. Fellows will develop a learning plan that is based on the strengths and developmental needs observed. This plan must be recorded in the learning log within the training profile.

Taking the Mini-CEX

Fellows are expected to undertake four to six observed encounters in each training year.

Definition of terms for specific areas of assessment

<p>Overall clinical competence Overall, a "satisfactory" candidate in this area is a candidate that demonstrates a systematic approach. They must be consistently competent across the marking categories, and have clearly demonstrated effort to ensure patient comfort and safety. Also, they reduce risks, as appropriate, in the clinical situation.</p>	<p>History taking A "satisfactory" candidate in this area is one that effectively uses appropriate questioning to obtain an accurate, adequate history of the necessary information, and responds appropriately to verbal and non-verbal cues.</p>
<p>Clinical management A "satisfactory" candidate in this area makes an appropriate diagnosis, formulates a suitable management plan, selectively orders or performs the appropriate diagnostic studies, and considers the risks and benefits to the patient. The candidate demonstrates a clear understanding of the patients' community needs, the socioeconomic context, as well as the mortality and morbidity patterns in the community. They also provide high-quality care for the patient, family, and broader community.</p>	<p>Communication skills A "satisfactory" candidate in this area is one that explores the patient's problem using plain English in a manner that is open, honest, and empathetic. They negotiate a suitable management plan/therapy with the patient while establishing trust and showing respect and compassion. This candidate attends to the patient's comfort needs, shows awareness of relevant legal frameworks, and is aware of their own limitations. When it is relevant, the candidate demonstrates an understanding regarding various cultural beliefs, values, and priorities (like those of the Aboriginal and Torres Strait Islander people, as well as other cultural groups) regarding the health and health care provision of the patient. They effectively communicate in a respectful manner regarding these cultural differences.</p>

4.3.2. SUMMATIVE ASSESSMENT

The learner will be awarded their fellowship certificate upon the successful completion of these comprehensive examinations at the program's end.

- The final written examination assesses learners' theoretical knowledge and critical thinking skills in relation to not only all of the topics but also the clinical experience obtained during the program. The examination format and scoring system is based on the Saudi

Commission Examination Rules and Regulations, available from the SCFHS website (www.scfhs.org.sa).

- The final examination is an OSCE that assesses learners' clinical skills, including data gathering, patient management, communication, and counseling. This examination includes a specific number of stations, which are designed to achieve the training objectives. The examination format is based on the Saudi Commission Examination Rules and Regulations, available from the SCFHS website (www.scfhs.org.sa).

Final written exam	Questions	Time	Mark	Pass
	120 multiple-choice +/- short notes	2.5 hours	120	70%

Final objective structured clinical exam*	Clinical (structured oral cases) 10 cases, including taking a patient's history, a case scenario, short cases, slides, data interpretation, real/simulated patients, etc.	Mark	Pass
	100	70%	

*Passing the final written exam is a prerequisite for entering the clinical exam.

Examination Blueprint

Questions are based on an educational or instructional objective, according to the blueprint. Below is an example that does not reflect the real exam blueprint. For updated and approved exams blueprints, please refer to the assessment page at the SCFHS website.

Table 1:

No.	Subject	%	Domain				
			Epidemiology, prevention, and health promotion	Pathogenesis and basic science	Diagnosis, investigation, and data interpretation	Management	Other
1	Cardiology	15					
2	Nephrology	10					
3	Endocrinology	10					
4	Gastroenterology	10					
5	Emergency	15					
6	Pulmonology	10					
7	Ambulatory	5					
8	Adolescent Medicine	5					
9	Neurology	15					
10	Research	5					
	Total	100	~10–15%	~20–25%	~20–25%	~30–40%	~5–10%

5. APPENDICES

- **Appendix 1: Academic Activities**
- **Appendix 2: ITER**
- **Appendix 3: Community Volunteering**
- **Appendix 4: Research**
- **Appendix 5: Mini-CEX**

Appendix 1

Academic Activates (Speaker Evaluation)

Fellow's Name	<input type="text"/>	Date	/ /
Level of Training	<input type="radio"/> F1 <input type="radio"/> F2	Location	<input type="text"/>
Assessor's Name	<input type="text"/>	Position	<input type="text"/>
Topic Title	<input type="text"/>	Delivery Mode	<input type="text"/>

Performance Rating: Unsatisfactory (1), Below Average(2), Average (3), Above Average(4), Outstanding (5)

Items		1	2	3	4	5	NA
1	Session organization						
2	Logical progression of delivery						
3	Scientific contents preparation						
4	Validity and adequacy of background information						
5	Statement of clear objectives						
6	Use of valid and updated citations and resources						
7	Utilization of appropriate technology						
8	Utilization of appropriate and well-designed tables and graphs						
9	Clear voice and effective communication skills						
10	Audience engagement and interaction						
Overall (Total score/no. of evaluated items)							<input type="text"/>

Assessor's Comments:

Aspects done well	Areas for improvement	Agreed actions
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>

Appendix 2

IN-TRAINING EVALUATION REPORT (ITER)

Fellow's Name	<input type="text"/>	Date	/ /
Level of Training	<input type="radio"/> F 1 <input type="radio"/> F 2	Location	<input type="text"/>
Assessor's Name	<input type="text"/>	Position	<input type="text"/>
Program	<input type="text"/>	Rotation	<input type="text"/>

Performance Rating: Unsatisfactory (1), Below Average(2), Average (3), Above Average(4), Outstanding (5)

Items						
Medical Knowledge						
1	MK 1: Demonstrates medical knowledge of sufficient breadth and depth to practice family medicine.	1	2	3	4	5 NA
2	MK 2: Applies critical thinking and decision-making skills in patient care based on the best available information and resources.	1	2	3	4	5 NA
Patient Care						
3	PC 1: Provides preventive and promotive care to all individuals and their families in the targeted community.	1	2	3	4	5 NA
4	PC 2: Provides continuous maternal and child care through well-structured system to support safe pregnancy and delivery, and children wellbeing.	1	2	3	4	5 NA
5	PC 3: Manages acute or urgent problems by providing needed treatment in the right place at the right time.	1	2	3	4	5 NA
6	PC 4: Manages patients with chronic illnesses, and terminally ill patients, by providing comprehensive biopsychosocial-spiritual, integrated, and coordinated care, to improve patients and caregivers quality of life.	1	2	3	4	5 NA
7	PC 5: Delivers specialty-specific planned care and coordinate other planned care through accessible and efficient pathway.	1	2	3	4	5 NA
Communication and Collaboration						
8	CC 1: Develops and maintains meaningful relationships and effectively communicates with patients, families, physicians and other healthcare professionals.	1	2	3	4	5 NA
9	CC 2: Collaborates with healthcare professionals and participates effectively in teamwork and inter-professional activities.	1	2	3	4	5 NA
10	CC 3: Documents and shares patient information appropriately to facilitate clinical decision making, and preserve confidentiality.	1	2	3	4	5 NA
11	CC 4: Uses technology to enhance communication with individuals' community and health professionals.	1	2	3	4	5 NA
Management and Leadership						
12	ML 1: Provides cost-conscious medical care to optimize resources utilization.	1	2	3	4	5 NA
13	ML 2: Assesses, improves and monitors quality of care delivered to patients and their families.	1	2	3	4	5 NA
14	ML 3: Applies patient safety principles and measures to minimize the incidence and impact of, and maximizes recovery from, adverse events.	1	2	3	4	5 NA
15	ML 4: Advocates for individuals, families, and community health according to their health needs and priorities, based on the principles of the community-oriented primary care model.	1	2	3	4	5 NA
16	ML 5: Manages conflicts in the workplace effectively and professionally, whether they are personal conflicts, conflicts with patients and their families, or conflicts within the healthcare team	1	2	3	4	5 NA

ITER (cont.)

Items						
Professionalism						
17	PO 1: Adheres to ethical principles derived from the profession, Islamic faith and culture, and humanism values.	1	2	3	4	5 NA
18	PO 2: Recognizes and adheres to rules and regulations organizing the healthcare practices in the kingdom.	1	2	3	4	5 NA
19	PO 3: Develops and maintains professional conduct and a sense of accountability.	1	2	3	4	5 NA
20	PO 4: Demonstrates a commitment to physician health and wellbeing.	1	2	3	4	5 NA
Scholarship						
21	SC 1: Demonstrates capacity for reflective practice, personal growth, and lifelong learning.	1	2	3	4	5 NA
22	SC 2: Contributes effectively in educating individuals and community, including patients, students, residents, and other healthcare professionals.	1	2	3	4	5 NA
23	SC 3: Integrates best available evidence into practice considering context, epidemiology of the disease, comorbidity, and the complexity of patients.	1	2	3	4	5 NA
24	SC 4: Contributes in scientific research and publication of knowledge relevant to family medicine practice.	1	2	3	4	5 NA
Overall (total score/no. of evaluated items)						

Assessor's Comments:

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Are you in agreement with this assessment? (Fellow) YES NO

How do you rate the assessor?

Low 1 2 3 4 5 6 7 8 9 10 High

Resident's comments (if any) on this evaluation:

.....

.....

1st Assessor's Name and Signature	2nd Assessor's Name and Signature	Fellow's Name and Signature	Program director Name and Signature

Appendix 4

Research Milestones Progression

Fellow's Name <input style="width: 90%;" type="text"/>	Date / /
Level of Training <input type="radio"/> F 1 <input type="radio"/> F 2	Location <input style="width: 80%;" type="text"/>
Assessor's Name <input style="width: 90%;" type="text"/>	Position <input style="width: 80%;" type="text"/>
Research Title <input style="width: 95%;" type="text"/>	

Progression Status:

Items	1st attempt	2nd attempt	3rd attempt	Completed	Supervisor signature
1 Proposal Writing	/ /	/ /	/ /	<input type="radio"/> YES <input type="radio"/> NO	
2 Ethical and administrative approval	/ /	/ /	/ /	<input type="radio"/> YES <input type="radio"/> NO	
3 Literature review	/ /	/ /	/ /	<input type="radio"/> YES <input type="radio"/> NO	
4 Research tools generation	/ /	/ /	/ /	<input type="radio"/> YES <input type="radio"/> NO	
5 Data collection	/ /	/ /	/ /	<input type="radio"/> YES <input type="radio"/> NO	
6 Data entry	/ /	/ /	/ /	<input type="radio"/> YES <input type="radio"/> NO	
7 Analysis	/ /	/ /	/ /	<input type="radio"/> YES <input type="radio"/> NO	
8 Discussion	/ /	/ /	/ /	<input type="radio"/> YES <input type="radio"/> NO	
9 Conclusion and recommendation	/ /	/ /	/ /	<input type="radio"/> YES <input type="radio"/> NO	
10 Thesis writing	/ /	/ /	/ /	<input type="radio"/> YES <input type="radio"/> NO	

Supervisor's Comments:

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Supervisor's Name and Signature	Fellow's s Name and Signature	Program director (or equivalent) Name and Signature
<div style="border: 1px solid black; width: 100%; height: 100%;"></div>	<div style="border: 1px solid black; width: 100%; height: 100%;"></div>	<div style="border: 1px solid black; width: 100%; height: 100%;"></div>

Appendix 5

Mini-CEX

Fellow's Name <input style="width: 90%;" type="text"/>	Date / /
Level of Training <input type="radio"/> F1 <input type="radio"/> F2	Location <input style="width: 80%;" type="text"/>
Assessor's Name <input style="width: 90%;" type="text"/>	Position <input style="width: 80%;" type="text"/>
Setting <input type="radio"/> In-patient <input type="radio"/> Out-patient <input type="radio"/> Emergency <input type="radio"/> Other	<input style="width: 80%;" type="text"/>

Case Description:

Patient Age <input style="width: 40%;" type="text"/> years	Sex <input type="radio"/> Male <input type="radio"/> Female	Diagnosis <input style="width: 90%;" type="text"/>
Summary	Complexity <input type="radio"/> High <input type="radio"/> Average <input type="radio"/> Low	

Performance Rating: Time taken for observation (min.)

Items	Novice	Beginner	Competent	Proficient	Not Applicable
1. Medical interviewing skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Physical examination skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Counselling and Communications Skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Clinical judgment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Consideration for Patient/Professionalism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Organization/efficiency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	—

Assessor's Comments: Time Taken for feedback (min.)

Aspects were done well	Areas for improvement	Agreed actions

