



الهيئة السعودية للتخصصات الصحية
Saudi Commission for Health Specialties

PEDIATRIC OTOLARYNGOLOGY Fellowship



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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

PREFACE

- The primary goal of this manual is to outline the learning objectives and enrich the training experience of the pediatric otolaryngology fellowship trainees so that they become independent and competent future pediatric otolaryngologists.
- This curriculum may contain sections outlining regulations associated with training; however, such regulations can be further reviewed in the “General Bylaws of Training in Postgraduate Programs” and “Executive Policies” published by the Saudi Commission for Health Specialties (SCFHS), which can be accessed online through the official SCFHS website. For discrepancies in regulation statements, the statement with the most updated bylaws and executive policies should be applied.
- As this curriculum is subjected to periodic refinements, please refer to the electronic version posted online for the most updated edition: www.scfhs.org.sa

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II. COPYRIGHT STATEMENTS

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We would also like to acknowledge that the CanMEDS framework is a copyright of the Royal College of Physicians and Surgeons of Canada, and many of the description's competencies have been acquired from their resources.

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IV. INTRODUCTION

1. Context of Practice

The growth of the population of the Kingdom of Saudi Arabia is among the fastest worldwide, and more than half of the population is below the age of 15 years. Furthermore, with increases in the quality of medical services, particularly in high-risk pregnancy, neonatology, and pediatric intensive care, the need for pediatric otolaryngologists is increasing.

Pediatric otolaryngology is a subspecialty of otolaryngology – head & neck surgery, and it focuses on the medical and surgical care and management of neonates, infants, children, and adolescents 18 years and younger. Pediatric otolaryngology provides care for children with complex problems and co-morbidities that includes open and endoscopic airway reconstruction, aerodigestive pathologies, congenital and acquired pediatric hearing loss, and various head and neck congenital anomalies, infections and neoplasms.

2. Goals and Responsibilities of Curriculum Implementation

The growth of the population of the Kingdom of Saudi Arabia is among the fastest worldwide, and more than half of the population is below the age of 15 years. With increases in the quality of medical services, particularly in high risk pregnancy and neonatology cases, the need for pediatric otolaryngologists is increasing. It is estimated that 0.2-0.3 pediatric otolaryngologists are needed for every 100,000 individuals in the population¹. The aim of the pediatric otolaryngology fellowship program is to produce well-qualified pediatric otolaryngologists who have the required expertise in this field by spending sufficient time in two well-period suggested. These centers must be very busy tertiary care centers and dedicated as referral centers for the Kingdom.



3. What is new in this edition? (Only for updated curricula, not for new ones!)

This version is an updated curriculum with the purpose of keeping track of the accepted worldwide competency of graduate fellows in pediatric otolaryngology. The new curriculum has been modified to maintain the core educational principles and follow an internationally accepted regulatory body (CanMEDs framework).

In this version, changes have been made to provide a greater focus on the core subspecialty, reduce the time spent in off-service rotations, and increase the academic output of each of fellow.

This curriculum will also ensure that the graduating fellow has experienced a balanced program that covers all the subdisciplines of pediatric otolaryngology and provides specific milestones to achieve.

V. ABBREVIATIONS USED IN THIS DOCUMENT

💡 Advice for Authors

Try to limit the use of abbreviations to the recognized ones, for examples:

Abbreviation	Description
SCFHS	Saudi Commission for Health Specialties
F(1)	(First) year of Fellowship
PT	Progress test
OSCE	Objective Structured Clinical Examination
OSPE	Objective Structured Practical Examination
Mini-CEX	Mini-Clinical Experience report
DOPS	Direct Observation of Procedural Skills report
CBD	Case-Based Discussion report
CBE	Competency-Based Education
ITER	In-Training Evaluation Report
COT	Consultation Observation Tool
FTC	Fellowship Training Committee



VI. PROGRAM ENTRY REQUIREMENTS

The candidates are required to fulfill the following:

1. Successful completion of an accredited residency-training program in otolaryngology
2. Saudi Board certification in otolaryngology or the equivalent within three years of certification or have at least successfully passed the written part of the Saudi Board Certification and is eligible to take the oral part of the Saudi Board Certification
3. Three confidential letters of references
4. An interviews must be conducted to evaluate each candidate.
5. Sponsorship letter
6. Release letter from current employer

VII. LEARNING AND COMPETENCIES

1. Introduction to Learning Outcomes and Competency-Based Education

1.0 Knowledge

1.1 Pediatric Otolaryngology (20 months)

At the end of the rotation, the fellow should be able to perform the following:

- 1- Identify pediatric otolaryngology-related disorders that are in the fields of pediatric airway, otology, sinonasal, head and neck, and plastics.
- 2- Describe the management of a child with hearing loss, compromised airway, neck mass, and various sinonasal disorders.
- 3- Analyze complex pediatric otolaryngology-related medical conditions in a multi-disciplinary manner.
- 4- Apply the surgical skills required to perform complex pediatric otolaryngology surgeries (listed in the operative procedure section)
- 5- Select the appropriate diagnostic tests and management options to treat children with various otolaryngology-related disorders.

1.2 Elective Rotation (2 months)

At the end of this rotation, the fellow will have achieved the specific goals of this elective rotation that will be set upon determining the rotation. For example, a fellow may choose to perform an elective in pediatric otolaryngology at another institution that performs advanced fetal surgeries that are not frequently performed at the center. The objectives of this rotation are to

- Expose the fellows to the surgical skills and management knowledge for various in-utero diseases, including diaphragmatic hernias
- Allow the fellow to acquire an understanding of the multidisciplinary approach to managing a fetus with complex airway issues.

1.3 Research Rotation (2 months)

At the end of the 2 months of research, the fellow will be able to



- Obtain the basic skills to set up a research project
- Develop a research question
- Develop a plan for a research project
- Produce an ethics review board application and appropriately complete an IRB form
- Initiate the first steps of the project (e.g., data collection)

At the end of the 2 years of fellowship, the fellow will be able to present the research project at a national or international conference, write a manuscript, or publish a research project.

2.0 Skills

By the end of training, the fellow should have acquired skills appropriate to those of a junior consultant in the following areas.

2.1 Pre-operative care

2.1.1. Obtain history and physical examination skills specific to the infants and children and skills necessary to interview parents, explain the diagnosis, proposed treatment, and prognosis and obtain an informed consent.

2.1.2. Utilize and interpret diagnosis aids.

2.1.3. Prepare patients for surgery, including assessing anesthetic risk. These skills will be evaluated by direct observations on an ongoing basis, and formally reported on the evaluation form. They will also be tested during in-training examinations to which the SCFHS standards apply.

2.2 Operative Care

This includes both minor and major surgery, with an emphasis on index cases. The fellow must demonstrate an ability to exercise judgment and control in unexpected situations and show ingenuity in dealing with “one-of-kind” problems. He/she should demonstrate an ability to assist more junior colleagues in the performance of procedures listed below in the Practice-Based Learning section and should be able to operate independently.

These skills will be evaluated by direct observation on an on-going basis and formally reported on the evaluation form. A log of all operative procedures must be kept and provided to the Program Director on an official form. A formal logbook review and evaluation are conducted with the program director every six months.

2.3 Postoperative care

Maintain hemostasis (fluids and electrolytes, temperature control, monitoring, etc.)

Early recognition of complications

Achieve optimum pain control

These skills will be evaluated by direct supervision, reviewed at the time of word rounds, and formally reported on the evaluation form.

2.4 Ancillary skills

2.1.1. Demonstrate proficiency in surgical skills for endoscopic sinus surgery in children under four years of age.

2.1.2. Demonstrate proficiency in surgical skills for flexible and rigid bronchoscopy in neonate, infant, child

2.1.3. Demonstrate proficiency in surgical skills for tracheotomy-premature infant, child.

2.1.4. Demonstrate proficiency in surgical skills for the extraction of foreign body from the aerodigestive tract

2.1.5. Demonstrate proficiency in surgical skills for airway surgery

2.1.6. Demonstrate proficiency in surgical skills for the repair of congenital anomalies.

2.1.7. Demonstrate proficiency in surgical skills for the surgical treatment of masses.

3.0 Attitudes

At the end of the 2 years of fellowship, the fellow will be able to perform the following:

Demonstrate appropriate attitudes and relational skills relative to the child and his family in the clinical context and demonstrate similar interpersonal skills with other caregivers and hospital staff.

Master stress control skills, communication skills, teaching skills, critical appraisal of the literature, lifelong learning skills, and knowledge of quality assurance, medico legal and ethical issues.

Although some of these skills are acquired during college of medicine and otolaryngology training, the following objectives are more or less specific to pediatric medicine and surgery:

- Relative to communication skills:



- Communicate with the child at his/her level in a non-threatening way.
- Anticipate and address parents' questions and concerns.
- Understand that sometimes a large investment of time must be made when dealing with families but that this is always rewarded later with a better therapeutic relationship.
- Relative to critical appraisal:
 - Make decisions on what specific procedure he/she will use for specific conditions, such as gastroesophageal reflux, choanal atresia, etc., and be able to justify that choice, which will be tested during in-training examinations.
 - Able to critically evaluate articles presented at the Journal Club.
- Relative to medico-legal and ethical issues
 - Understand the rules and regulations of the country.
 - Address the following specific issues, among others, through reading and attendance at ethics rounds and informal discussions:
 - a. Informed consent in children.
 - b. Refusal of treatment, especially in situations where “quality of life” is a major issue.
 - c. Inter-parental conflict in treatment decisions.
 - d. Withholding of treatment.
 - e. Parent-physician conflict in treatment decisions.
Physician-physician conflict in treatment decisions.
 - f. Am I treating this child as I would want my own child to be treated?
 - g. Ethics of research on children.

Trainees are expected to progress from novice to mastery level based on a certain set of professional competencies. SCFHS has endorsed the CanMEDS framework to articulate professional competencies. This curriculum applies principles of competency-based medical education.

CanMEDS

Goals:

Medical Expert

1. Practice medicine within their defined scope of practice and expertise
 - 1.1 Demonstrate a commitment to high-quality care of their patients

- 1.2 Integrate the CanMEDS Intrinsic Roles into their practice of medicine
- 1.3 Apply knowledge of the clinical and biomedical sciences relevant to their discipline
- 1.4 Perform appropriately timed clinical assessments with recommendations that are presented in an organized manner
- 1.5 Carry out professional duties in the face of multiple competing demands
- 1.6 Recognize and respond to the complexity, uncertainty, and ambiguity inherent in medical practice
2. Perform a patient-centered clinical assessment and establish a management plan
 - 2.1 Prioritize issues to be addressed in a patient encounter
 - 2.2 Elicit a history, perform a physical exam, select appropriate investigations, and interpret their results for the purpose of diagnosis and management, disease prevention, and health promotion
 - 2.3 Establish goals of care in collaboration with patients and their families, which may include slowing disease progression, treating symptoms, achieving cure, improving function, and palliation
 - 2.4 Establish a patient-centered management plan
3. Plan and perform procedures and therapies for the purpose of assessment and/or management
 - 3.1 Determine the most appropriate procedures and therapies
 - 3.2 Obtain and document informed consent, explaining the risks and benefits of, and the rationale for, a proposed procedure or therapy
 - 3.3 Prioritize a procedure or therapy, taking into account clinical urgency and available resources
 - 3.4 Perform a procedure in a skillful and safe manner, adapting to unanticipated findings or changing clinical circumstances
4. Establish plans for ongoing care and, when appropriate, timely consultation
 - 4.1 Implement a patient-centered care plan that supports ongoing care, follow-up on investigations, response to treatment, and further consultation
5. Actively contribute as an individual and a member of a team providing care to the continuous improvement of health care quality and patient safety



- 5.1 Recognize and respond to harm from health care delivery, including patient safety incidents
- 5.2 Adopt strategies that promote patient safety and address human and system factors

Communicator

1. Establish professional therapeutic relationships with patients and their families
 - 1.1 Communicate using a patient-centered approach that encourages patient trust and autonomy and is characterized by empathy, respect, and compassion
 - 1.2 Optimize the physical environment for patient comfort, dignity, privacy, engagement, and safety
 - 1.3 Recognize when the values, biases, or perspectives of patients, physicians, or other health care professionals may have an impact on the quality of care and modify the approach to the patient accordingly
 - 1.4 Respond to a patient's non-verbal behaviors to enhance communication
 - 1.5 Manage disagreements and emotionally charged conversations
 - 1.6 Adapt to the unique needs and preferences of each patient and to his or her clinical condition and circumstances
2. Elicit and synthesize accurate and relevant information by incorporating the perspectives of patients and their families
 - 2.1 Use patient-centered interviewing skills to effectively gather relevant biomedical and psychosocial information
 - 2.2 Provide a clear structure for and manage the flow of an entire patient encounter
 - 2.3 Seek and synthesize relevant information from other sources, including the patient's family, with the patient's consent
3. Share health care information and plans with patients and their families
 - 3.1 Share information and explanations that are clear, accurate, and timely while also checking for patient and family understanding
 - 3.2 Disclose harmful patient safety incidents to patients and their families accurately and appropriately
4. Engage patients and their families in developing plans that reflect the patient's health care needs and goals

- 4.1 Facilitate discussions with patients and their families in a way that is respectful, non-judgmental, and culturally safe
- 4.2 Assist patients and their families to identify, access, and make use of information and communication technologies to support their care and manage their health
- 4.3 Use communication skills and strategies that help patients and their families make informed decisions regarding their health
5. Document and share written and electronic information about the medical encounter to optimize clinical decision-making, patient safety, confidentiality, and privacy
 - 5.1 Document clinical encounters in an accurate, complete, timely, and accessible manner, in compliance with regulatory and legal requirements
 - 5.2 Communicate effectively using a written health record, electronic medical record, or other digital technology
 - 5.3 Share information with patients and others in a manner that respects patient privacy and confidentiality and enhances understanding

Collaborator

1. Work effectively with physicians and other colleagues in the health care profession
 - 1.1 Establish and maintain positive relationships with physicians and other colleagues in the health care profession to support relationship-centered collaborative care
 - 1.2 Negotiate overlapping and shared responsibilities with physicians and other colleagues in the health care professions in episodic and ongoing care
 - 1.3 Engage in respectful shared decision-making with physicians and other colleagues in the health care professions
2. Work with physicians and other colleagues in the health care professions to promote understanding, manage differences, and resolve conflicts
 - 2.1 Show respect toward collaborators
 - 2.2 Implement strategies to promote understanding, manage differences, and resolve conflicts in a manner that supports a collaborative culture
3. Hand over the care of a patient to another health care professional to facilitate continuity of safe patient care



- 3.1 Determine when care should be transferred to another physician or health care professional
- 3.2 Demonstrate safe handover of care, using both verbal and written communication, during a patient transition to a different health care professional, setting, or stage of care

Leader

1. Contribute to the improvement of health care delivery in teams, organizations, and systems
 - 1.1 Apply the science of quality improvement to contribute to improving systems of patient care
 - 1.2 Contribute to a culture that promotes patient safety
 - 1.3 Analyze safety incidents to enhance systems of care
 - 1.4 Use health informatics to improve the quality of patient care and optimize patient safety
2. Engage in the stewardship of health care resources
 - 2.1 Allocate health care resources for optimal patient care
 - 2.2 Apply evidence and management processes to achieve cost-appropriate care
3. Demonstrate leadership in professional practice
 - 3.1 Demonstrate leadership skills to enhance health care
 - 3.2 Facilitate change in health care to enhance services and outcomes
4. Manage their practice and career
 - 4.1 Set priorities and manage time to integrate practice and personal life
 - 4.2 Manage career planning, finances, and health human resources in a practice
 - 4.3 Implement processes to ensure personal practice improvement

Health Advocate

1. Respond to an individual patient's health needs by advocating with the patient within and beyond the clinical environment
 - 1.1 Work with patients to address determinants of health that affect them and their access to needed health services or resources
 - 1.2 Work with patients and their families to increase opportunities to adopt healthy behaviors

- 1.3 Incorporate disease prevention, health promotion, and health surveillance into interactions with individual patients
2. Respond to the needs of the community or population that they serve by advocating with them for system-level change in a socially accountable manner
 - 2.1 Work with a community or population to identify the determinants of health that affect them
 - 2.2 Improve clinical practice by applying a process of continuous quality improvement to disease prevention, health promotion, and health surveillance activities
 - 2.3 Contribute to a process to improve health in the community or population they serve

Scholar

1. Engage in the continuous enhancement of their professional activities through ongoing learning
 - 1.1 Develop, implement, monitor, and revise a personal learning plan to enhance professional practice
 - 1.2 Identify opportunities for learning and improvement by regularly reflecting on and assessing their performance using various internal and external data sources
 - 1.3 Engage in collaborative learning to continuously improve personal practice and contribute to collective improvements in practice
2.
 - 2.1 Recognize the influence of role-modelling and the impact of the formal, informal, and hidden curriculum on learners
 - 2.2 Promote a safe learning environment
 - 2.3 Ensure patient safety is maintained when learners are involved
 - 2.4 Plan and deliver a learning activity
 - 2.5 Provide feedback to enhance learning and performance
 - 2.6 Assess and evaluate learners, teachers, and programs in an educationally appropriate manner
3. Integrate best available evidence into practice
 - 3.1 Recognize practice uncertainty and knowledge gaps in clinical and other professional encounters and generate focused questions that can address them



- 3.2 Identify, select, and navigate pre-appraised resource
- 3.3 Critically evaluate the integrity, reliability, and applicability of health-related research and literature
- 3.4 Integrate evidence into decision-making in their practice
4. Contribute to the creation and dissemination of knowledge and practices applicable to health
 - 4.1 Demonstrate an understanding of the scientific principles of research and scholarly inquiry and the role of research evidence in health care
 - 4.2 Identify ethical principles for research and incorporate them into obtaining informed consent, considering potential harms and benefits, and considering vulnerable populations
 - 4.3 Contribute to the work of a research program
 - 4.4 Pose questions amenable to scholarly inquiry and select appropriate methods to address them
 - 4.5 Summarize and communicate to professional and lay audiences, including patients and their families, the findings of relevant research and scholarly inquiry

Professional

1. Demonstrate a commitment to patients by applying best practices and adhering to high ethical standards
 - 1.1 Exhibit appropriate professional behaviors and relationships in all aspects of practice by demonstrating honesty, integrity, humility, commitment, compassion, respect, altruism, respect for diversity, and maintenance of confidentiality
 - 1.2 Exhibit appropriate professional behaviors and relationships in all aspects of practice by demonstrating honesty, integrity, humility, commitment, compassion, respect, altruism, respect for diversity, and maintenance of confidentiality
 - 1.3 Recognize and respond to ethical issues encountered in practice
 - 1.4 Recognize and manage conflicts of interest
 - 1.5 Exhibit professional behaviors in the use of technology-enabled communication
2. Demonstrate a commitment to society by recognizing and responding to societal expectations in health care

- 2.1 Demonstrate accountability to patients, society, and the profession by responding to societal expectations of physicians
- 2.2 Demonstrate a commitment to patient safety and quality improvement
3. Demonstrate a commitment to the profession by adhering to standards and participating in physician-led regulation
 - 3.1 Fulfill and adhere to the professional and ethical codes, standards of practice, and laws governing practice
 - 3.2 Recognize and respond to unprofessional and unethical behaviors in physicians and other colleagues in the health care professions
 - 3.3 Participate in peer assessment and standard-setting
4. Demonstrate a commitment to physician health and well-being to foster optimal patient care
 - 4.1 Exhibit self-awareness and manage influences on personal well-being and professional performance
 - 4.2 Manage personal and professional demands for a sustainable practice throughout the physician life cycle
 - 4.3 Promote a culture that recognizes, supports, and responds effectively to colleagues in need

2. Program Duration

The Pediatric Otolaryngology Program is 24-month-long program that starts in January each year.

The fellow must adhere to the rules and regulations of the Saudi Council for Health Specialties during the training period. The candidate will be granted four weeks of holiday per year, as determined by the training hospital.

3. Program Rotations

- Pediatric Otolaryngology (20 months)
- Elective Rotation (2 months)
- Research Rotation (2 months)



Training Year	Mandatory core rotation*			Elective rotation**			Selective rotation***			Annual leave
	Rotation name	Duration	Setting	Rotation name	Duration	Setting	Rotation name	Duration	Setting	Duration
F1	Pediatric Otolaryngology	10 Months	Hospital	Based on the Fellows Interest	1 month	To be decided individually	Research	1 month	Hospital / lab	4 weeks (Inside the rotation)
F2	Pediatric Otolaryngology	10 months	Hospital	Based on the Fellows Interest	1 month	To be decided individually	Research	1 month	Hospital / lab	4 weeks (Inside the rotation)

(***Mandatory core rotation**): Set of rotations that represent program core components and are mandatory.

****Elective rotation**: Set of rotations related to the specialty, as determined by the scientific council/committee; the trainee is required to do complete a portion of these electives.

*****Selective rotation**: Set of other rotations that can be selected by the trainee (directed by mentor/program director) to enhance competency and acquire skills of the specialty.

4. Mapping of learning objectives and competency roles to program rotations:

Rotation Name: (replicate table based on the rotation number)

Rotation setting	Training stage	Training years	Rotation's duration (Months/weeks/block)	Rotation specific objectives (SMART)* (Describe the proposed outcomes in the form of a KSA)	Competency roles**
Pediatric Otolaryngology	F1	1	10 months	<ol style="list-style-type: none"> 1- Identify pediatric otolaryngology-related disorders in the fields of pediatric airway, otology, sinonasal, head and neck and plastics. 2- Describe the management of a child with hearing loss, a compromised airway, a neck mass, and various sinonasal disorders. 3- Analyze complex pediatric otolaryngology-related medical conditions in a multi-disciplinary manner. 4- Apply the surgical skills required to perform complex pediatric otolaryngology surgeries (listed in the operative procedure section) 5- Select the appropriate diagnostic tests and management options to treat children with various otolaryngology-related disorders. 	Medical expert, scholar, professional, communicator, collaborator, leader, health advocate
	F2	2	10 months	<ol style="list-style-type: none"> 1- Identify pediatric otolaryngology-related disorders in the fields of pediatric airway, otology, sinonasal, head and neck and plastics. 2- Describe the management of a child with hearing loss, a compromised airway, a neck mass, and various sinonasal disorders. 	Medical expert, scholar, professional, communicator, collaborator, leader, health advocate



Rotation setting	Training stage	Training years	Rotation's duration (Months/weeks/block)	Rotation specific objectives (SMART)* (Describe the proposed outcomes in the form of a KSA)	Competency roles**
				<p>3- Analyze complex pediatric otolaryngology-related medical conditions in a multi-disciplinary manner.</p> <p>4- Apply the surgical skills required to perform complex pediatric otolaryngology surgeries (listed in the operative procedure section)</p> <p>5- Select the appropriate diagnostic tests and management options to treat children with various otolaryngology-related disorders.</p>	

Rotation setting	Training stage	Training years	Rotation duration	Rotation-specific objectives (SMART)* (To describe the purposed outcomes in the form of KSA)	Competency roles**
Research	F1	1	1 month	<ul style="list-style-type: none"> - Obtain the basic skills to set up a research project - Develop a research question - Develop a plan for a research project - Produce an ethics review board application and complete an IRB form appropriately - Initiate the first steps of the project (e.g., data collection) 	Medical expert, Scholar, professional, communicator
	F2	2	1 month		



Rotation setting	Training stage	Training years	Rotation duration (Months/weeks/block)	Rotation-specific objectives (SMART)* (Describe the proposed outcomes in the form of a KSA)	Competency roles**
<i>Elective</i>	<i>F1</i>	<i>1</i>	<i>1 month</i>	<i>Acquire surgical skills for surgeries that are not frequently performed at the training center</i>	<i>Medical expert, scholar, professional, communicator, collaborator, leader, health advocate</i>
	<i>F2</i>	<i>2</i>	<i>1 month</i>	<i>Acquire surgical skills for surgeries that are not frequently performed at the center of training</i>	<i>Medical expert, scholar, professional, communicator, collaborator, leader, health advocate</i>

Important notice:

**** The strategic direction of the Saudi Commission for Health Specialties (SCFHS) applies the best competency models of training governance to achieve the highest quality of training, and postgraduate programs are also required to cover the research and the evidence-based practice in their curriculum. Research and scholarship are domains of the curricula. Trainees at all levels need to demonstrate that they can apply an evidence-based approach to their practice, including the adoption of an evidence-based approach to practice for informed decision-making and enhanced patient care and outcomes. Trainers are expected to demonstrate the ability to carry out critical appraisals of the literature. They are also encouraged to be involved in clinical research or clinical audits for the advancement of science & medicine.

The embedding of research could be realized by conducting lectures on academic half-days and engaging in rotation-based content or available courses that prepare the trainee to conduct well-designed sound research on pertinent topics relevant to the field. The research requirement for the subspecialized postgraduate program should be selected to continue the requirement of the general post-graduate programs with clear reasonable expectations. Based on this strategic approach, the SCFHS indicates that

the scientific council/committee will have the freedom to customize the research application based on their needs. We highly recommend utilizing the developed research and EBP online modules provided by [SCFHS](#) (see the checklist) in [appendix A \(Research and EBP online modules\)](#).



VIII. CONTINUUM OF LEARNING

This section describes the learning activities that should take place in each key progressive stage of the specialty. Trainees are reminded that life-long continuous professional development (CPD) is available and required for every healthcare provider to meet the demand of their vital profession. The following table states how the role is expected to develop throughout junior, senior, and consultant levels of practice.

For Fellowship programs:

Specialty General Practice	F1 (Junior Level)	F2 (Senior Level)	Consultant Subspecialist
Subspecialty non-practicing	Dependent/supervised practice	Dependent/supervised practice	Independent practice/provide supervision
Obtain basic health science and foundational levels of core discipline knowledge	Obtain fundamental knowledge related to core clinical problems of pediatric otolaryngology	Apply knowledge to provide appropriate clinical care related to core clinical problems of pediatric otolaryngology	Acquire advanced and up-to-date knowledge related to core clinical problems of pediatric otolaryngology
Internship on the practice of pediatric otolaryngology	Apply clinical skills, such as physical examination of pediatric patients and practical procedures related to the core presenting problems and procedures in pediatric otolaryngology	Analyze and interpret the findings from clinical skills to develop appropriate differential diagnoses and management plans for the patient	Compare and evaluate challenging, contradictory findings and develop expanded differential diagnoses and management plans

IX. TEACHING METHODS

The teaching process in postgraduate residency/fellowship/diploma training programs is based mainly on the principles of adult learning theory. The trainees are expected to be aware of the importance of learning and present active engagement in the content and the process of their own learning. The training programs implement adult learning concepts in each feature of the activities where the residents are responsible for their own learning requirements. Formal training time would include the following four teaching activities:

- Program-specific learning activities
- Universal topics
- General learning opportunities
- Simulations

Program-Specific Learning Activities:

Program-specific activities are educational activities that are specifically designed and intended for trainees instruction during their training time. The trainees are required to attend these activities, and non-compliance can lead to disciplinary actions. It is advisable to link the attendance and participation in these activities to the formative assessment tools (see the formative assessment section below). Program administration should support these activities by providing guaranteed time for trainees to attend these activities and allow them to participate in such activities.

A) Program Academic Half-Day:

Every week, at least 2-4 hours of formal training time (commonly referred to as *academic half-days*) should be reserved. A formal teaching time is an activity that is planned in advanced with assigned tutor(s), time slots, and venue. Formal teaching time excludes bedside teaching, clinic postings etc. The academic half-day covers the core specialty topics that are determined and approved by the specialty's scientific council aligned with the specialty-defined competencies and teaching methods. The core specialty topics will ensure that important clinical problems of the specialty are well-taught. It is recommended to conduct the lectures in an interactive case-based discussion format. The learning objectives of each core topic need to be clearly defined, and it is preferable to use pre-learning material. Whenever applicable, core specialty topics should include workshops, team-based learning (TBL) and simulation to develop skills in core procedures. Regional supervisory committees should work in conjunction with academic and



training affairs, program directors, and chief residents should to ensure the planning and implementation of academic activities as indicated in the curriculum. The trainee should be an actively involved in the development and delivery of the topics under faculty supervision, and this involvement might be in the form of content delivery, content development, or research. The trainee's supervisor should make sure that the discussion of each topic is stratified into three learning domain categories whenever applicable: knowledge, skill, and attitude. (Appendix A)

B) Practice-Based Learning:

The Pediatric Otolaryngology Program is a two-year program, and each area has the following time requirements:

1. Pediatric Otolaryngology: 20 months
2. Elective Rotation: 2 months
3. Research Time: 2 months

Operative Procedure

- I. Otolologic Surgery (30)
 1. Myringoplasty & tympanoplasty (5)
 2. Mastoidectomy (5)
 3. Cochlear implantation (15)
 4. Bone-anchored hearing device implantation (3)
- II. Rhinologic Surgery (20)
 1. Reduction of nasal fracture (2)
 2. Septoplasty (2)
 3. Choanal atresia repair (2)
 4. Endoscopic sinus surgery (10)
- III. Oral and Pharyngeal Surgery (8)
 1. Frenuloplasty (2)
 2. Tongue surgery (2)
 3. Pharyngoplasty (2)
 4. Drooling procedure (parotid duct ligation, submandibular duct rerouting, sublingual gland excision, submandibular gland excision) (2)
 5. Endoscopy Airway Surgery (50)
 - a. Laryngoscopy with intervention (30)
 - b. Bronchoscopy with intervention (10)

- c. Esophagoscopy with intervention (5)
- IV. Open Airway Surgery (10)
 - a. Tracheostomy (age < 3 years) (5)
 - b. Laryngoplasty / laryngotracheoplasty (3)
 - c. Cricotracheal / tracheal resection and repair / slide tracheoplasty (1)
- V. Head and Neck Surgery (30)
 1. Lymph node biopsy (4)
 2. Incision and drainage of deep neck infections (4)
 3. Sistrunk procedure (3)
 4. Bronchial cyst, sinus or fistula excision (2)
 5. Submandibular gland excision (2)
 6. Hemi or total thyroidectomy (2)
 7. Parotidectomy (1)

C) General Learning Opportunities:

Formal training time should be supplemented by other practice-based learning (PBL) activities, such as the following:

- Journal Club
 - Journal clubs are scientific sessions where evidence-based papers are reviewed and discussed.
 - Minimum of three journal clubs are conducted each annually.
 - The fellow trainee is expected to attend all journal clubs during his core rotations.
- Grand rounds
 - Grand rounds are a full department academic lecture conducted weekly.
 - The fellow trainee is expected to attend all grand rounds and present a minimum of one grand round during his fellowship.
- Quality improvement committees and meetings
- Continuous professional development (CPD) activities related to the specialty (conferences and workshops)
- Morbidity and mortality (M&M)
 - The M&M conference is an opportunity to discuss patient cases where adverse effects have occurred through errors or complications. The



goal of this resource is to refocus the content of morbidity and mortality and transform it into a platform for teaching patient safety principles and emphasizing error reduction strategies.

- The fellow trainee has a leading role in preparing and conducting the M&M conferences.

1.1 Simulation:

Airway	Fellow	<ul style="list-style-type: none"> - Perform donning of personal protective equipment in correct order - Perform doffing of personal protective equipment in correct order - Recognize the indications and contraindications for delayed sequence airway - Prepare treating team and equipment for delayed sequence airway - Perform delayed sequence airway - Insert laryngeal mask airway appropriately - Perform cricothyroidotomy with different techniques - Perform rigid and flexible bronchoscopies - Perform suspension laryngoscopies - Perform removal of foreign body from the airway - Perform removal of foreign body from the esophagus - Perform tracheostomy 	High Fidelity Simulation, Task Trainers, SPs
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X. ASSESSMENT AND EVALUATION

1. Purpose of Assessment

Assessment plays a vital role in the success of postgraduate training and guides trainees and trainers to achieve defined standards, learning outcomes, and competencies. On the other hand, assessment provides feedback to learners and faculty regarding curriculum development and implementation, teaching methods, and learning environment quality. Reliable and valid assessment is essential for evaluating curriculum alignment relative to the objectives, learning methods, and assessment tools. Finally, assessment assures patients and the public that health professionals are safe and competent to practice.

Assessment can serve the following purposes:

- a. **Assessment for learning** involves the use of trainee performance information to determine their learning and identify areas of improvement. It enables the educators to use information about trainees' knowledge, understanding and skills to provide feedback to trainees about learning and how to improve.
- b. **Assessment as learning** involves trainees in the learning process while enabling them to monitor their own progress. Trainees use self-assessment and the educators' feedback to reflect on their progression. It develops and supports trainees' metacognitive skills. Assessment as learning is crucial in helping residents/fellows become lifelong learners.
- c. **Assessment of learning** is used to demonstrate trainee learning-based achievements. This is a graded assessment that usually counts towards the trainees' end-of-training degree.
- d. **Feedback and evaluation** represent assessment outcomes that represent quality metrics capable of improving the learning experience.

Miller's Pyramid of Assessment provides a framework for assessing trainees' clinical competencies, and it acts as a guide for the trainers to select the assessment methods to target different clinical competencies, including "knows," "knows how," "shows how," and "does" (checklist Appendix A).



For the sake of organization, assessment will be further classified into two main categories: *Formative* and *Summative*.

2. Formative Assessment

2.1 General Principles

As adult learners, trainees should strive to seek and develop their performance based on feedback obtained throughout their journey of competency from “novice” to “mastery” levels. Formative assessment (also referred to as formative assessment) is the component of assessment that is distributed throughout the academic year and primarily performed to provide trainees with effective feedback.

Every two weeks, at least 1 hour should be assigned for trainees to meet with their mentors, in order to review performance reports (e.g., ITER, e-portfolio, mini-CEX, etc.). Input from the overall formative assessment tools will be utilized at the end of the year to determine whether individual trainees will be promoted from the current to subsequent training level. Formative assessment will be defined based on the scientific (council/committee) recommendations, and they are usually updated and announced for each individual program at the start of the academic year.

According to the executive policy on formative assessment (available online: www.scfhs.org), formative assessment will exhibit the following features based on the Miller’s pyramid (checklist *appendix A*) :

- a. Multisource: minimum four tools.
- b. Comprehensive: covering all learning domains (knowledge, skills, and attitude).
- c. Relevant: focusing on workplace-based observations.
- d. Competency milestone-oriented: reflecting trainee’s expected competencies that match the trainee’s developmental level.

Trainees should play an active role seeking feedback during their training, and trainers are expected to provide timely and formative assessment. The SCFHS will provide an e-portfolio system to enhance communication and analysis of data from the formative assessment.

Trainers and trainees are expected to follow the recommendations of the scientific council regarding the updated forms, frequency, distribution, and deadlines related to the implementation of evaluation forms.

Clinical & Academic Requirements for Graduation:

1. Patient Care & Clinical Judgment

- Comprehensive assessment of patients' illnesses
- Appropriate diagnostic and treatment plan
- Accomplishes ward duties efficiently for patients
 - i. Rounds
 - ii. Care conferences
 - iii. Parent/ Patient Calls
 - iv. Collaboration with staff regarding treatment plan care, discharge planning, etc.
- Rapport with patients and families

2. Medical Knowledge

- Knowledge of fundamental surgical skills.
- Familiarity with the literature appropriate for the level of training.
- Knowledge of medical fundamentals, including other diagnoses and medications.
- Knowledge of hospital and home care of pediatric otolaryngology patients.

3. Technical and Procedural Skills

- Understanding concepts and principles of the operation
- Manual dexterity
- Completion of the procedural log book (please see the appendix)

4. Attitude and Professional Behavior

- Acceptance of responsibility
- Initiate/accountability
- Rapport with colleagues and other health care professionals
- Appearance

5. Documentation

- Notes and summaries that document the course of hospitalization



Written communication with physicians, ENT/MD referral medical review, OR notes

- Legibility
- Operative reports are accurate and timely
- Delinquent records

6. Research

- Prior to graduation, the fellow must have participated in a research project and either published it in a journal, presented it in a local or international conference, or acquired a letter from the research supervisor indicating the fellow's role in the research and the future expectations from this project (publication, presentation, etc.)

2.2 Formative Assessment Tools

Learning domain	Formative assessment tools	Important details (e.g., frequency, specifications related to the tool)
Knowledge	- Structured academic activities	Reviewed with the program director every six months
	- Case-based discussion with the program director	Discussion with program director every 3 months
Skills	- Logbook (DOPS)	Reviewed with the program director every six months
	Research Progress	Research progress reviewed with the program director every six months with the following milestones: <ul style="list-style-type: none"> - Started a project by the end of the first year - Presented a project by the end of second year in either local or international conference OR manuscript written.
Attitude	ITER: In-Training Evaluation Report	At the end of each core rotation

3. Summative Assessment

3.1 General Principles

Summative assessment is the component of assessment that aims primarily to make informed decisions on trainees' competency. Compared with the formative assessment, the *summative assessment* does not aim to provide constructive feedback. For further details on this section, please refer to the General Bylaws of Training in Postgraduate Programs and General Assessment Bylaws (available online: www.scfhs.org). To be eligible to sit for the final exams, trainees will be granted a "Certification of Training Completion" upon successful completion of all training rotations.

3.2 Final In-training Evaluation Report (FITER)

In addition to approval of the completion of clinical requirements (resident's logbook) by the supervising committee, a FITER is also prepared by the program directors for each resident at the end of his or her final year in training. This report will be the basis for obtaining the Certificate of Training Program Completion and represent the qualification to sit for the Final Specialty Exams.

3.3 Certification of Training Completion

To be eligible to sit for final specialty examinations, each trainee is required to obtain a "*Certification of Training Completion*". Based on the General Bylaws of Training in Postgraduate Programs and executive policy (please refer to www.scfhs.org), trainees will be granted a "Certification of Training-Completion" once the following criteria are fulfilled:

- a. Successful completion of all training rotations.
- b. Completion of training requirements (e.g., logbook, research, others) as outlined in FITER that are approved by the scientific council/committee of specialty.
- c. Clearance from the SCFHS training affairs to ensure compliance with tuition payment and completion of universal topics.

A "Certification of Training Completion" will be issued and approved by the supervisory committee or its equivalent according to the SCFHS policies.

3.4 Final Specialty Examinations

The final specialty examination is the summative assessment component that grants trainees the specialty's certification. It has two elements:



- a) Final written exam: to be eligible for this exam, trainees are required to have obtained a “Certification of Training Completion”.
- b) Final clinical/practical exam: to be eligible to sit for the final clinical/practical exam, trainees are required to pass the final written exam in.

For further details on final exams, please refer to the General Bylaws of Training in Postgraduate Programs and General Assessment Bylaws (available online: www.scfhs.org).

Learning Domain	Summative Assessment Tools	Passing Score
Knowledge	- Final Written Examination	At least a borderline passing grade in each tool in accordance with the standard setting method used by the executive administration of assessment
Skills	- Objective Structured Clinical Examination (OSCE) - Structured Oral Examination (SOE)	At least a borderline passing grade in each tool in accordance with the standard setting method used by the executive administration of assessment
Attitude	FITER: In-Training Evaluation Report	Successfully pass FITER

Final Exam Blueprint for Written Examination

No.	Sections	Percentage
1	Basic science	7%
2	Electrolyte and fluid resuscitation	7%
3	Bleeding and coagulation	7%
4	Respiratory physiology	7%
5	Pediatric anesthesia and ventilation	8%
6	Pediatric audiology, speech and swallowing	7%
7	Upper airway disease	10%
8	Neck masses and tumors	10%
9	Congenital disease and syndromes	10%
10	Pediatric otology neurotology	10%
11	Pediatric rhinology	10%
12	Pediatric trauma and foreign body	7%
Total		100%



Final Exam Blue Print for clinical examination

No.	Sections	Percentage
1	Basic science	7%
2	Electrolyte and fluid resuscitation	7%
3	Bleeding and coagulation	7%
4	Respiratory physiology	7%
5	Pediatric anesthesia and ventilation	8%
6	Pediatric audiology, speech and swallowing	7%
7	Upper airway disease	10%
8	Neck masses and tumors	10%
9	Congenital disease and syndromes	10%
10	Pediatric otology neurotology	10%
11	Pediatric rhinology	10%
12	Pediatric trauma and foreign body	7%
Total		100%

* Basic science includes the following:

1. Mechanism of hearing
2. Upper airway physiology and anatomy
3. Antibiotic pharmacotherapy
4. Microbiology
5. Laser physics

Note:

- Blueprint distributions of the examination may differ by up to +/-5% in each category.
- Percentages and content are subject to change at any time. See the SCFHS website for the most up-to-date information.

- Research, Ethics, Professionalism and Patient Safety are incorporated within the various domains.

Suggested References:

- Otolaryngology head and neck surgery, Byron Bailey
- Otolaryngology head and neck surgery pediatric chapter, Charles Cumming
- Professionalism and Ethics, Handbook for Residents, Practical Guide, Prof. James Ware, Dr. Abdulaziz Fahad Alkaabba, Dr. Ghaiath MA Hussein, Prof. Omar Hasan Kasule, SCFHS, Latest Edition
- Essentials of Patient Safety, SCHS, Latest Edition

Note:

This list is intended for use as a study aid only. SCFHS does not intend the list to imply endorsement of these specific references, nor are the exam questions necessarily taken solely from these sources.



XI. PROGRAM AND COURSE EVALUATION

The SCFHS will apply variable measures to evaluate the implementation of this curriculum. Training outcomes of this program will adhere to the quality assurance framework endorsed by the Central Training Committee at the SCFHS. Trainee assessment (both formative and summative) results will be analyzed and mapped to the curriculum content. Other indicators that will be incorporated are as follows:

- Reports from trainees' evaluations of faculty members.
- Reports from trainees' evaluations of rotations.

Goal-based evaluation: the achievement of intended milestones will be evaluated at the end of each stage to assess the progress of the curriculum delivery, and any deficiencies will be addressed in the following stage by utilizing the time devoted for trainee-selected topics and professional session.

In addition to subject-matter opinions and best practices from benchmarked international programs, the SCFHS will apply a robust method to ensure that this curriculum will utilize all available data when this curriculum is revised in the future.

XII. POLICIES AND PROCEDURES

This curriculum represents the methods and materials that should be adopted by trainees and outlines the learning objectives that will be applied to trainees and evaluated by trainers to achieve the identified educational outcomes. The SCFHS has a full set of “General Bylaws of Training in Postgraduate Programs” and “Executive Policies” (published on the official SCFHS website) that regulate all training-related processes. The general bylaws of training, assessment, and accreditation as well as executive policies on admission, registration, formative assessment and promotion, examination, trainee representation and support, duty hours, and leaves are examples of regulations that need to be implemented. Under this curriculum, trainees, trainers, and supervisors must comply with the most updated bylaws and policies, which can be accessed online (via the official SCFHS website).



XIII. APPENDICES

A. Example of half day activities

B. References

Appendix-A

Sample of half day activities

<i>Academic week</i>	<i>Section</i>	<i>Date</i>	<i>Time</i>	<i>Sessions</i>	<i>presenters</i>
1	Pediatric Airway	Jan-3	08:00-09:00	Welcome to the program	Program director
			09:00-11:00	Case-based study**	A
			11:00-12:00	Approach to stridor	B
2	Pediatric Airway	Jan-10	08:00-09:00	Airway reconstruction surgery	C
			09:00-11:00	Case-based study	D
			11:00-12:00	Complex airway simulation	E
3	Pediatric otology	Jan-17	08:00-09:00	Congenital hearing loss	F
			09:00-11:00	Case base study	B
			11:00-12:00	Temporal bone dissection	C
4	Pediatric otology	Jan-24	08:00-09:00	Congenital ear malformation	K
			09:00-11:00	Case-based study	B

<i>Academic week</i>	<i>Section</i>	<i>Date</i>	<i>Time</i>	<i>Sessions</i>	<i>presenters</i>
			11:00-12:00	Journal Club*	A

* Journal club could be performed in the evening or during the half-day

** Case-based study could be performed in the evening or during the half-day

Appendix-H

References:

In APA

- 1- Tunkel DE, Cull WL, Jewett EAB, Brotherton SE, Britton CV, Mulvey HJ. Practice of Pediatric Otolaryngology: Results of the Future of Pediatric Education II Project. Arch Otolaryngol Head Neck Surg. 2002;128(7):759–764. doi:10.1001/archotol.128.7.759
- 2- Beal, M. D., Kinnear, J., Anderson, C. R., Martin, T. D., Wamboldt, R., & Hooper, L. (2017). The effectiveness of medical simulation in teaching medical students critical care medicine: a systematic review and meta-analysis. Simulation in Healthcare, 12(2), 104-116.
- 3- Cook, D. A., Erwin, P. J., & Triola, M. M. (2010). Computerized virtual patients in health professions education: a systematic review and meta-analysis. Academic Medicine, 85(10), 1589-1602.
- 4- This reference is an example for the general outline of the CanMEDS competency (Frank JR, Snell L, Sherbino J, editors. CanMEDS 2015 Physician Competency Framework. Ottawa: Royal College of Physicians and Surgeons of Canada; 2015)



- 5- Cook, D. A., Hatala, R., Brydges, R., Zendejas, B., Szostek, J. H., Wang, A. T., Erwin P. J., & Hamstra, S. J. (2011). Technology-enhanced simulation for health professions education: a systematic review and meta-analysis. *Jama*, 306(9), 978-988.
- 6- Lynagh, M., Burton, R., & Sanson-Fisher, R. (2007). A systematic review of medical skills laboratory training: where to from here? *Medical education*, 41(9), 879-887.
- 7- So, H. Y., Chen, P. P., Wong, G. K. C., & Chan, T. T. N. (2019). Simulation in medical education. *Journal of the Royal College of Physicians of Edinburgh*, 49(1), 52-57.
- 8- Pediatric Otolaryngology Procedure Domains Minimum Requires – Accreditation Council for Graduate Medical Education (ACGME) 2020.