الهيئة السعودية للتخصصات الصحية
Saudi Commission for Health Specialties

Urethral Reconstruction Fellowship


بسم الله الرحمن الرحيم

Preface

- The primary goal of this document is to enrich the training experience of postgraduate trainees by outlining the learning objectives to become independent and competent future practitioners.
- This curriculum may contain sections outlining some regulations of training; however, such regulations need to be sought from the training's "General Bylaws" and "Executive Policies" published by the Saudi Commission for Health Specialties (SCFHS), which can be accessed online through the official SCFHS website. In the occasion of discrepancy in regulation statements, then the one stated in the most updated bylaws and executive policies will be the reference to apply.
- As this curriculum is subjected to periodic refinements, please refer to the electronic version posted online for the most updated edition at: www.scfhs.org.sa

CONTRIBUTORS

Curriculum Development Committee

- Dr. Waleed Altaweel
- Dr. Raed Almannie
- Dr. Abdullah Alkhayal

Curriculum Review Committee Members

- Dr Nouf Alrumaihi MBBS, Msc.MedEd., PMP
- Dr Mai Alajaji, Msc.MedEd, PhD

Approved by the Scientific Committee

- Dr.Sultan Alkhateeb
- Dr.Saleh binsaleh

Approved by Head of Curriculum Review Committee

- Dr.Ali Dr.Ali Alassiri, MBBS, Msc.MedEd. FRCSC, FACS

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Correspondence: Saudi Commission for Health Specialties P.O. Box: 94656 Postal Code: 11614

Contact Center: 920019393

E-mail: Curricula@scfhs.org.sa

Website: www.scfhs.org.sa

FOREWARD

The Urethral Reconstruction Fellowship curriculum development team acknowledges the valuable contributions and feedback from the scientific committee members in the development of this program. We extend special appreciation and gratitude to all the members who have been pivotal in the completion of this booklet, especially the Curriculum Group, the Curriculum Specialists, and the Scientific Council. 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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Introduction

1. Context of Practice

Urethral Reconstruction is a sub-specialty of urological surgery dealing with a spectrum of disorders that affects the male urethra such as proximal urethral stricture distal urethral stricture, meatal stenosis, crippled hypospadias, pan-urethral stricture, and urethral trauma (Appendix-A). It is an internationally rising field within urology due to the realization of the specific set of surgical skills and expertise required to manage these debilitating and life-long disorders, necessitating a referral pattern of practice among urologists. This sub-specialty is growing in its demand worldwide due to the observed better outcomes for the afflicted patients when they are referred to specialized surgeons. International bodies such as the Society for Genitourinary Reconstruction Surgeons (GUR) are successfully promoting and organizing this sub-specialty internationally, setting clear standards for training.

With the growing population in Saudi Arabia and great advances in the field of urethral reconstruction over the last three decades, sub-specialization in urethral reconstruction has become essential. Currently, fewer than 10 fellowship-trained reconstructive urologists are practicing in Saudi Arabia despite the high demand. It is well known that one of the main pillars for improving a medical specialty is the creation of dedicated training; this leads to great improvements in clinical, academic, and training areas.

Urology as a specialty has had a tremendous growth in Saudi Arabia. We are privileged to have excellent expertise in urology with state-of-the-art units all over the kingdom, one of the leading surgical specialties. The Saudi Board of Urology was one of the milestones from this growth; we observed excellent outcomes from the board.

Given the noticeable development of urology in Saudi Arabia, the recent advances in diagnosis and management of reconstructive urology patients, and the rapid growth of population in Saudi Arabia, it is necessary to create a new sub-specialty fellowship in urethral reconstruction. This will ensure the provision of enough reconstructive urologists in Saudi Arabia and comprehensive care for reconstructive urology patients in all regions of the kingdom.

2. Goal and Responsibility of Curriculum Implementation

The ultimate goal of this curriculum is to guide trainees to become competent in their specialty. This goal will require a significant amount of effort and coordination from all stakeholders involved in postgraduate training. As an "adult-learner," trainees have to demonstrate full engagement with a proactive role by: careful understanding of learning objectives, self-directed learning, problem solving, openness and readiness to apply what they have learned by reflective practice from feedback and formative assessment, and self-wellbeing and seeking support when needed. The Saudi Commission for Health Specialties (SCFHS) will apply the best models of training governance to achieve the best quality of training. Academic affairs in training centers and regional supervisory training committees will have major roles in training supervision and implementation. The Specialty Scientific Committee will be responsible for making sure that the content of this curriculum is constantly updated to match the best-known standards in postgraduate education of their specialty.

VI. Abbreviations Used This Document

Abbreviation	Description
SCFHS	Saudi Commission for Health Specialties
F(1)	(First) year of Fellowship
F(2)	(Second) year of Fellowship
PT	Progress Test
OSCE	Objective Structured Clinical Examination
DOPS	Direct Observation of Procedural Skills report
CBD	Case-Based Discussion report
CBE	Competency-Based Education
ITER	In-Training Evaluation Report
RUFC	Reconstructive Urology Fellowship Committee
GUR	Genitourinary Reconstruction

VII. Program Entry Requirements

- Successful completion of accredited training program in urology by the Saudi Health Council
- CV
- Three recommendation letters
- Passing an interview by the RUFC

VIII. Learning Outcomes and Competency

1. Introduction to Learning Outcomes and Competency-based Education

Training should be guided by well-defined "learning objectives" that are driven by targeted "learning outcomes" of a particular program to serve specific specialty needs. Learning outcomes are supposed to reflect the professional "competencies" and tasks that are aimed to be "entrusted" by trainees upon graduation. This will ensure that graduates will meet the expected demands of the healthcare system and patient care in relation to their particular specialty. Competency-based education (CBE) is an approach of "adult learning" that is based on achieving pre-defined, fine-grained, and well-paced learning objectives that are driven from complex professional competencies.

Professional competencies related to healthcare are usually complex and contain a mixture of multiple learning domains (knowledge, skills, and attitude). CBE is expected to change the traditional way of postgraduate education. For instance, time of training, though it is a precious resource, should not be looked to as a proxy for competence (e.g., time of rotation in certain hospital areas is not the primary marker of competence achievement). Furthermore, CBE emphasizes the critical role of informed judgment of learner's competency progress, which is based on a staged and formative assessment that is driven from multiple workplace-based observations. Several CBE models have been developed for postgraduate education in healthcare (example: CanMEDs by the Royal College of Physician and Surgeon of Canada (RCPSC), the CBME-Competency model by the Accreditation Council for Graduate Medical Education (ACGME), Tomorrow's Doctors in the UK, and multiple others). The following are concepts to enhance the implementation of CBE in this curriculum:

- **Competency: Competency** is a cognitive construct assessing the potential to perform efficiently in a given situation based on the standard of the profession. Professional roles (e.g., expert, advocate, communicator, leader, scholar, collaborator, and professional) are used to define competency roles in order to make them amenable for learning and assessment.
- **Milestones:** Milestones are stages along the developmental journey along the competency continuum. Trainees throughout their learning journey, from junior through senior levels, will be assisted to transform from being novice/supervised into master/unsupervised practitioners. This should not undermine the role of supervisory/regulatory bodies toward malpractice of independent practitioners. Milestones are expected to enhance the learning process by pacing the training/assessment to match the developmental level of trainees (junior vs. senior).
- **Learning Domains:** Whenever possible, efforts should be directed to annotate the learning outcomes with the corresponding domain (K=Knowledge, S=Skills, and A=Attitude). You might have more than one annotation for a given learning outcome.
- **Content-area Categorization:** It is advisable to categorize the learning outcomes in broad content areas related to the practices of the profession. For example, diagnostic versus therapeutic, simple versus complex, urgent versus chronic, etc.
- **Trainees** are expected to progress from novice to mastery level in a certain set of professional competencies. SCFHS has endorsed the CanMEDs to articulate professional competencies. This curriculum applies principles of competency-based medical education. CanMeds represents globally accepted frameworks outlining competency roles. The "CanMeds 2015 framework" has been adopted in this section.

General learning goals

Medical expert

- Practice medicine within the urethral reconstruction field
- Perform a patient-centered clinical assessment for the urethral reconstruction patients
- Establish a management plan for urethral reconstruction patients
- Perform procedures and therapies for the purpose of assessment and/or management of urethral reconstruction cases
- Establish plans for ongoing care and, when appropriate, timely consultation

Communicator

- Establish professional therapeutic relationships with patients and their families
- Elicit accurate and relevant information, incorporating the perspectives of patients and their families
- Engage patients and their families in developing plans that reflect the patient's health care needs and goals
- Perform effective documentation and share written and electronic information about the medical encounter to optimize clinical decision-making, patient safety, confidentiality, and privacy

Collaborator

- Work with physicians and other colleagues in the health care professions to promote understanding, manage differences, and resolve conflicts
- Hand over the care of a patient to another health care professional to facilitate continuity of safe patient care

Leader

- Contribute to the improvement of health care delivery in teams, organizations, and systems
- Demonstrate leadership in professional practice
- Manage career planning, finances, and health human resources in a practice

Health advocate

- Respond to an individual patient's health needs by advocating for the patient within and beyond the clinical environment
- Respond to the needs of the communities or populations they serve by advocating for them for system-level change in a socially accountable manner
- Actively contribute, as an individual and as a member of a team providing care, to the continuous improvement of health care quality and patient safety

Scholar

- Integrate best available evidence into practice
- Contribute to the creation and dissemination of knowledge and practices applicable to health
- Contribute to the education of students, residents, the public, and other health care professionals
- Engage in the continuous enhancement of their professional activities through ongoing learning

Professional

- Demonstrate a commitment to patients by applying best practices and adhering to high ethical standards
- Demonstrate a commitment to physician health and well-being to foster optimal patient care
- Demonstrate a commitment to society by recognizing and responding to societal expectations in health care
- Demonstrate a commitment to the profession by adhering to standards and participating in physician-led regulation

2. Program Duration

This is a two-year fellowship program.

3. Program Rotations

Training year	Mandatory core rotations*		Vacation
	Rotation name	Duration	
F1	• Urethral reconstruction 1	48 weeks	4 weeks
F2	• Urethral reconstruction 2	48 weeks	4 weeks

*Mandatory core rotation: Set of rotations that represent program core component and are mandatory to do.

4. Mapping of learning Objectives and Competency roles to Program Rotations

This section aims to match the competencies and objectives related to each rotation. Trainees and trainers should work together to achieve these objectives during teaching and formative assessment. The expectations should evolve as the training level progresses (training stage; milestones).

Rotation Name:

Rotation sitting	Training stage and year	Rotation's duration (weeks)	Rotation specific objectives (SMART)* (To describe the purposed outcomes in the form of KSA)	Competency roles**
Inpatient, Outpatient, ER	F1 (Junior level)	48 weeks	Knowledge: Upon completion of the training period, the fellow should be able to: 1- Discuss the management and prognosis on the index cases of urethral reconstruction (Appendix-B). 2-Form his/her own opinion, by the end of training, on what specific procedure he/she will use for what specific conditions, given the wide range of accepted procedures to treat urethral stricture disease (such as anastomotic and different types of buccal graft urethroplasty). Skills: By the end of training, the fellow should have acquired the skills appropriate in the following areas: 1-pre-operative care which includes: • Obtain a full history and physical examination (skills specific to the urethral reconstruction patient) • Explain the diagnosis, the proposed treatment, and prognosis. • Obtain an informed consent. • Interpret diagnostic aids. 2-Perform endoscopy with the emphasis on index cases (Appendix-B). 3-Demonstrate an ability to exercise judgment and control in unexpected situations. 4-Demonstrate an ability to assist more junior colleagues in the performance of procedures. 5-Demonstrate teaching abilities for residents rotating in the Saudi Board of Urology during endoscopic urethral surgery.	ME COM, CO, HA, P ME ME COM,CO,HA, P ME ME, P S, L, COM, CO

			6- Perform several procedures which are done in the office as part of either diagnostic workup or follow up, such as cystoscopy, retrograde urethrography, and voiding cystourethrography. Attitudes: 1- Develop an attitude and relationship skills with the patient in the clinical context, and similar interpersonal skills with other caregivers and hospital staff. 2- Demonstrate critical appraisal of the literature. 3- Demonstrate life-long learning skills and knowledge of quality assurance, medico-legal, and ethical issues.	ME P, S, L, CO, COMM S, L S HA, S, P
	F2 (Senior)	48 weeks	Knowledge: Upon completion of the training period, the fellow should be able to: 1-Diagnose, manage, and discuss the prognosis on the index cases of reconstructive urology (Appendix-C). 2-Demonstrate teaching abilities for residents rotating in the Saudi Board of Urology during open urethral reconstruction surgery Skills: By the end of training, the fellow should have acquired the skills appropriate in the following areas: 1-Pre-operative care which includes:	ME COM,CO,HA, P

			• Obtain a full history and physical examination (skills specific to the advanced urethral reconstruction patient). • Explain the diagnosis, the processed treatment, and prognosis in advanced urethral stricture patients. • Obtain an informed consent. • Interpret diagnostic aids. • Prepare the patient for surgery. 2-Perform major open surgery with the emphasis on index cases (Appendix-C). 3-Demonstrate an ability to exercise judgment and control in unexpected situations during advanced urethral reconstruction cases. 4-Demonstrate an ability to assist more junior colleagues in the performance of procedures, and should be able to operate independently. 5-Post-operative care: • Demonstrate the skills to recognize complications, pain control, management of drainage catheters, and stoma care. • Demonstrate an improvement in the development of these skills. Attitudes: 1- Develop and demonstrate appropriate attitude and relationship skills with the patient in the clinical context, and similar interpersonal skills with other caregivers and hospital staff. 2- Demonstrate teaching skills. 3- Demonstrate critical appraisal of the literature. 4- Demonstrate life-long learning skills and knowledge of quality assurance, medico-legal, and ethical issues.	ME ME COM,CO,HA, P ME ME, P S, L, COM, CO ME P, S, L, CO, COMM S, L

			5- Form his/her own opinion, by the end of training, on what specific procedure he/she will use for what specific conditions, given the wide range of accepted procedures to treat urethral stricture disease such as anastomotic and different types of buccal graft urethroplasty.	S HA, S, P ME, HA, S, P

e.g., CanMEDs (ME: Medical Expert, COM: Communicator, COL: Collaborator, L Leader, HA: Health Advocate, P: Professional, S: Scholar)

IX. Countinum of Learning

This includes learning that should take place in each key stage of progression within the specialty. Trainees are reminded of the fact of life-long Continuous Professional Development (CPD). Trainees should keep in mind the necessity of CPD for every healthcare provider in order to meet the demands of their vital profession. The following table states how the role is progressively expected to develop throughout junior, senior, and consultant levels of practice.

F1 (Junior Level)	F2 (Senior Level)
supervised	Independent
Apply knowledge to provide appropriate clinical care related to core clinical problems of the specialty	Acquire advanced and up-to-date knowledge related to core clinical problems of the specialty
Analyze and interpret the findings from clinical skills to develop appropriate differential diagnoses and management plan for the patient	Compare and evaluate challenging, contradictory findings and develop expanded differential diagnoses and management plan

X. Teaching Methods:

The teaching process in postgraduate fellowship training programs is based mainly on the principles of adult learning theory. The trainees feel the importance of learning and play active roles in the content and process of their own learning. The training programs implement the adult learning concept on each feature of the activities. The fellows are responsible for their own learning requirements. Formal training time would include the following three teaching activities:

- Program Specific Learning Activities
- Universal Topics
- General Learning Opportunities

1.1 Program Specific Learning Activities:

The program specific activities are educational activities that are specifically designed and intended for trainees' teaching during their training time. The trainees are required to attend these activities and non-compliance can subject trainees to disciplinary actions. It is advisable to link the attendance and the participation in these activities to the continuous assessment tools (see formative assessment section below). Program administration should support these activities by providing protected time for trainees to attend them.

A) Program academic half-day:

Every week at least 2–4 hours of formal training time (commonly referred to as academic half-day) should be reserved. A formal teaching time is an activity that is planned in advanced with assigned tutor, time slots, and venue. Formal teaching time excludes bedside teaching, clinic postings, etc. The academic half-day covers the core specialty topics which 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 interactive, case-based discussion formats. The learning objectives of each core topic need to be clearly defined and it is preferable to use a pre-learning material. Whenever applicable, core specialty topics should include workshops to develop skills in core procedures. Regional supervisory committees should coordinate with academic and training affairs and the program director to ensure planning and implementation of academic activities as indicated in the curriculum. There should be an active involvement of the trainee in the development and delivery of the topics under faculty supervision; the involvement might be in the form of delivery, content development, research, etc. The supervisor's educator should make sure that the discussion of each topic is stratified into three categories of the learning domain: knowledge, skill, and attitude (see Appendix-D for the table of knowledge topic list; see Appendix-E for the procedure list). The recommended numbers of half-days to be conducted annually is 40 sessions per training academic year, with time reserved for other forms of teaching methods such as journal

club, clinical, or practical teaching. The fellowship training committee, academic and training affairs, and the regional supervisory committees should work together to ensure planning and implementation of academic activities as indicated in the curriculum. This should aim for efficient use of available resources and optimization of exchange of expertise.

B) Clinical/practical teaching:

This includes courses and workshops (e.g., simulations, standardized patients, bedside teaching). This will allow each program to describe the required courses or workshops in detail including the objectives of the course or the workshop, the teaching methods, the expected time to complete the course/workshop during the training, and the assessment method applied for each activity. It is highly advisable to integrate these activities with the relevant formative assessment tools (e.g., DOPS, logbook, etc.).

C) Practice-based learning:

Training exposures during bedside, lab, OR, and other work-related activities represent excellent targets for learning. Trainees are expected to build their capacity based on self-directed learning. On the other hand, practice-based learning allows the educator to supervise trainees as they become competent in the required program practical skills which ensure fulfilling knowledge, psychomotor, and/or attitude learning domains. Each trainee needs to maintain a logbook documenting the procedures observed, performed under supervision, and performed independently. It would be prudent to determine the minimum number of procedures to be performed before training completion and the minimum number needed to maintain competency after certification.

1.1. Universal Topics

Universal topics are educational activities that are developed by SCFHS and are intended for all specialties. Priority will be given to topics as follows:

High value

Interdisciplinary and integrated

Requiring expertise that might be beyond the availability of the local clinical training sites

Universal topics have been developed by SCFHS and are available as e-learning online modules via personalized access for each trainee. Each universal topic will have a self-assessment at the end of the module. As indicated in the "executive policies of continuous assessment and annual promotion," universal topics are mandatory components of the criteria for the annual promotion of trainees from their current level of training to the subsequent level. Universal topics will be distributed over the whole period of training. Please refer to table-1 for universal topics modules assigned to every training year/stage of your program.

Table-1

Training year	UT module	Subjects	Objectives
F1	Module-1	1. Safe drug prescribing 2. Hospital-acquired infections 3. Sepsis; SIRS; DIVC 4. Antibiotic stewardship 5. Blood transfusion	Safe drug prescribing: At the end of the Learning Unit, you should be able to – a) Recognize the importance of safe drug prescribing in healthcare b) Describe the various Adverse Drug Reactions with examples of commonly prescribed drugs that can cause such reactions c) Apply principles of drug-drug interactions, drug-disease interactions, and drug-food

			interactions into common situations d) Apply principles of prescribing drugs in special situations such as renal failure and liver failure e) Apply principles of prescribing drugs in elderly, pediatrics age group patents, and in pregnancy and lactation f) Promote evidence-based cost-effective prescription g) Discuss ethical and legal framework governing safe drug prescribing in Saudi Arabia Hospital-Acquired Infections (HAI): At the end of the Learning Unit, you should be able to – a) Discuss the epidemiology of HAI with special reference to HAI in Saudi Arabia b) Recognize HAI as one of the major emerging threats in healthcare c) Identify the common sources and set-ups of HAI d) Describe the risk factors of common HAIs such as ventilator associated pneumonia, MRSA,

			CLABSI, and Vancomycin Resistant Enterococcus (VRE) e) Identify the role of healthcare workers in the prevention of HAI f) Determine appropriate pharmacological (e.g., selected antibiotic) and non-pharmacological (e.g., removal of indwelling catheter) measures in the treatment of HAI g) Propose a plan to prevent HAI in the workplace Sepsis, SIRS, DIVC: At the end of the Learning Unit, you should be able to – a) Explain the pathogenesis of sepsis, SIRS, and DIVC b) Identify patient-related and non-patient-related predisposing factors of sepsis, SIRS, and DIVC c) Recognize a patient at risk of developing sepsis, SIRS, and DIVC d) Describe the complications of sepsis, SIRS, and DIVC e) Apply the principles of management of patients with sepsis, SIRS, and DIVC

			f) Describe the prognosis of sepsis, SIRS, and DIVC Antibiotic Stewardship: At the end of the Learning Unit, you should be able to – a) Recognize antibiotic resistance as one of the most pressing public health threats globally b) Describe the mechanism of antibiotic resistance c) Determine the appropriate and inappropriate use of antibiotics d) Develop a plan for safe and proper antibiotic usage plan including right indications, duration, types of antibiotic, and discontinuation e) Appraise local guidelines for the prevention of antibiotic resistance Blood Transfusion: At the end of the Learning Unit, you should be able to – a) Review the different components of blood products available for transfusion b) Recognize the indications and contraindications of blood product transfusion

			c) Discuss the benefits, risks, and alternatives to transfusion d) Undertake consent for specific blood product transfusion e) Perform steps necessary for safe transfusion f) Develop understanding of special precautions and procedures necessary during massive transfusions Recognize transfusion associated reactions and provide immediate management
	Module-5	1. Pre-operative assessment 2. Post-operative care 3. Acute pain management 4. Chronic pain management 5. Management of fluid in the hospitalized patient 6. Management of electrolyte imbalances	Pre-Operative Assessment: At the end of the Learning Unit, you should be able to – a) Describe the basic principles of pre-operative assessment b) Preform pre-operative assessment in uncomplicated patient with special emphasis on i. General health assessment ii. Cardiorespiratory assessment iii. Medications and medical device assessment iv. Drug allergy

			v. Pain relief needs c) Categorize patients according to risks **Post-Operative Care:** At the end of the Learning Unit, you should be able to – a) Devise a post-operative care plan including monitoring of vitals, pain management, fluid management, medications, and laboratory investigations b) Hand over the patients properly to appropriate facilities c) Describe the process of patient post-operative recovery d) Identify common post-operative complications e) Monitor patients for possible post-operative complications f) Institute immediate management for post-operative complications **Acute Pain Management:** At the end of the Learning Unit, you should be able to – a) Review the physiological basis of pain perception b) Proactively identify patients who might be in acute pain

			c) Assess a patient with acute pain d) Apply various pharmacological and non-pharmacological modalities available for acute pain management e) Provide adequate pain relief for uncomplicated patients with acute pain f) Identify and refer patients with acute pain who can benefit from specialized pain services Chronic Pain Management: At the end of the Learning Unit, you should be able to – a) Review bio-psychosocial and physiological basis of chronic pain perception b) Discuss various pharmacological and non-pharmacological options available for chronic pain management c) Provide adequate pain relief for uncomplicated patients with chronic pain d) Identify and refer patients with chronic pain who can benefit from specialized pain services

			Management of Fluid in Hospitalized Patients: At the end of the Learning Unit, you should be able to – a) Review the physiological basis of water balance in the body b) Assess a patient for his/her hydration status c) Recognize a patient with over and under hydration d) Order fluid therapy (oral as well as intravenous) for a hospitalized patient e) Monitor fluid status and response to therapy through history, physical examination, and selected laboratory investigations Management of Acid-Base Electrolyte Imbalances: At the end of the Learning Unit, you should be able to – a) Review the physiological basis of electrolyte and acid-base balance in the body b) Identify diseases and conditions that are likely to cause or are associated

			with acid-base and electrolyte imbalances c) Correct electrolyte and acid-base imbalances d) Perform careful calculations, checks, and other safety measures while correcting acid-base and electrolyte imbalances e) Monitor response to therapy through history, physical examination, and selected laboratory investigations
F2	Module-6	1. Assessment of frail elderly 2. Mini-mental state examination 3. Prescribing drugs in the elderly 4. Care of the elderly	Assessment of Frail Elderly: At the of the Learning Unit, you should be able to – a) Enumerate the differences and similarities between comprehensive assessment of elderly patients and assessment of other patients b) Perform comprehensive assessment, in conjunction with other members of health care team, of a frail elderly patient with special emphasis on social factors, functional status,

			quality of life, diet and nutrition, and medication history c) Develop a problem list based on the assessment of the elderly patient **Mini-Mental State Examination:** At the end of the Learning Unit, you should be able to – a) Review the appropriate usages, advantages, and potential pitfalls of Mini-MSE b) Identify patients suitable for mini-MSE c) Screen patients for cognitive impairment through mini-MSE Prescribing Drugs to the Elderly: At the end of the Learning Unit, you should be able to – a) Discuss the principles of prescribing to the elderly b) Recognize polypharmacy, prescribing cascade, inappropriate dosages, inappropriate drugs, and deliberate drug exclusion as major causes of morbidity in the elderly

			c) Describe the physiological and functional declines in the elderly that contribute to increased drug-related adverse events d) Discuss drug-drug interactions and drug-disease interactions among the elderly e) Be familiar with Beers criteria f) Develop a rational prescribing habit for the elderly g) Counsel an elderly patient and family on safe medication usage **Care of the Elderly:** At the end of the Learning Unit, you should be able to – a) Describe the factors that need to be considered while planning care for the elderly b) Recognize the needs and well-being of caregivers c) Identify the local and community resources available in the care of the elderly d) Develop, with inputs from other health care professionals, an individualized care plan for an elderly patient

	Module-7	1. Occupational hazards of HCW 2. Evidence-based approach to smoking cessation 3. Patient advocacy 4. Ethical issues: transplantation/organ harvesting; withdrawal of care 5. Ethical issues: treatment refusal; patient autonomy 6. Role of doctors in death and dying	**Occupational Hazards of Health Care Workers (HCW):** At the end of the Learning Unit, you should be able to: a) Recognize common sources and risk factors of occupational hazards among HCW b) Describe common occupational hazards in the workplace c) Develop familiarity with legal and regulatory frameworks governing occupational hazards among HCW d) Develop a proactive attitude to promote workplace safety e) Protect yourself and colleagues against potential occupational hazards in the workplace **Evidence-based Approach to Smoking Cessation:** At the end of the Learning Unit, you should be able to – a) Describe the epidemiology of smoking and tobacco use in Saudi Arabia b) Review the effects of smoking on the smoker and family members c) Effectively use pharmacologic and non-pharmacologic

			measures to treat tobacco use and dependence d) Effectively use pharmacologic and non-pharmacologic measures to treat tobacco use and dependence among special population groups such as pregnant women, adolescents, and patients with psychiatric disorders **Patient Advocacy:** At the end of the Learning Unit, you should be able to – a) Define patient advocacy b) Recognize patient advocacy as a core value governing medical practice c) Describe the role of a patient advocate in the care of a patient d) Develop a positive attitude toward patient advocacy e) Be a patient advocate in conflicting situations f) Be familiar with local and national patient advocacy groups **Ethical issues:** Transplantation/organ harvesting; withdrawal of care: At the end of the Learning Unit, you should be able to –

			a) Apply key ethical and religious principles governing organ transplantation and withdrawal of care b) Be familiar with the legal and regulatory guidelines regarding organ transplantation and withdrawal of care c) Counsel patients and families in applicable ethical and religious principles d) Guide patients and families to make informed decisions Ethical issues: Treatment refusal; patient autonomy: At the end of the Learning Unit, you should be able to – a) Predict situations where a patient or family is likely to decline prescribed treatment b) Describe the concept of the "rational adult" in the context of patient autonomy and treatment refusal c) Analyze key ethical, moral, and regulatory dilemmas in treatment refusal d) Recognize the importance of patient autonomy in the decision-making process

			e) Counsel patients and families declining medical treatment in the best interest of the patients Role of Doctors in Death and Dying: At the end of the Learning Unit, you should be able to – a) Recognize the important role a doctor can play during the dying process b) Provide emotional as well as physical care to a dying patient and family c) Provide appropriate pain management to a dying patient d) Identify suitable patients and refer them to palliative care services

1.1 General Learning Opportunities:

A formal training time should be supplemented by other practice-based learning (PBL) such as:

- Journal clubs
- Grand rounds
- Involvement in quality improvement committees and meetings
- Continuous professional activities (CPD) relevant to specialty
- Morbidity and Mortality (M&M)

M&M conference offers trainees an opportunity to discuss patient cases where adverse effects had 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.

XI. Assessment and Evaluation

1. Purpose of Assessment

Assessment plays a vital role in the success of postgraduate training. Assessment will guide trainees and trainers to achieve defined standards, learning outcomes, and competencies. In addition, the assessment will provide feedback to learners and faculty regarding curriculum development, teaching methods, and quality of the learning environment. A reliable and valid assessment is an excellent tool to check the curriculum alignments between the objectives, learning methods, and assessment methods. Finally, assessment assures patients and the public that health professionals are safe and competent to practice medicine.

Assessment can serve the following purposes:

a. Assessment for learning involves trainers using information about trainees' knowledge, understanding, and skills to provide feedback to trainees about their learning process and how it may be improved.

b. Assessment as learning involves trainees in the learning process by enabling them to monitor their own progress. Trainees use self-assessment and the educators' feedback to reflect on their progression. This develops and supports trainees' metacognitive skills. Assessment as learning is crucial in helping fellows become life-long learners.

c. Assessment of learning demonstrates your learning achievement. This is graded assessment and usually counts toward the trainee's end-of-training degree.

d. Feedback and evaluation as assessment outcomes will represent a quality metric that can improve the learning experience.

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

2. Formartive Assessment

2.1 General Principles

Trainees, as adult learners, should strive for feedback throughout their journey of competency from “novice” to “mastery” levels. Formative assessment (also referred to as continuous assessment) is the component of assessment that is distributed throughout the academic year, aiming primarily to provide trainees with effective feedback. Every eight weeks, at least one hour should be assigned by 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 make the decision whether to promote each individual trainee from current-to-subsequent training level. Formative assessment will be defined based on the scientific (council/committee) recommendations (usually updated and announced for each individual program at the start of the academic year).

This is in accordance with the executive policy on continuous assessment
(Available online: www.scfhs.org)

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 trainee’s developmental level

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

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

2.2 Formative Assessment Tools

- The trainee will be evaluated according to the regulations of the Saudi council for health specialists.
- Trainee will attend the half-day academic teaching in one of the three contributing hospitals.
- Trainee will prepare cases for discussion every month supervised by the training committee. In addition, his/her progression in research will be evaluated.
- Trainee will be evaluated after each surgical case and given verbal feedback.
- Evaluation form will be completed at the end of each three-months duration by the training physician in compliance with the CanMeds role.
- At the end of each year, candidates will have an oral exam by the Reconstructive Urology Fellowship Committee and a short-essay exam (promotion exam).
- To quality for promotion, the first-year fellow must pass the written exam.
- To qualify for graduation, the second-year fellow must pass the oral and written exams.

Learning domain	Formative assessment tools	Important details (e.g., frequency, specifications related to the tool)
Knowledge	Presentation's checklist	Weekly
	Case-Based Discussion (CBD)	Monthly
Skills	Research progress report	Monthly
	DOPS: Direct Observation for Procedural Skills	Daily
	Logbook	Monthly
Attitude	ITER: In-Training Evaluation Report	3 months

3. Summative Assessment

3.1 General Principles

Summative assessment is the component of assessment that aims primarily to make informed decisions on trainees' competency. In comparison to formative assessment, summative assessment does not aim to provide constructive feedback. For further details on this section please refer to the general bylaws and the executive policy of assessment (available online: www.scfhs.org). In order to be eligible to sit for the final exams, a trainee should be granted *"Certification of Training-Completion."*

3.2 Certification of Training-Completion

In order to be eligible to set for final specialty examinations, each trainee is required to obtain "Certification of Training-Completion." Based on the training bylaws and executive policy (please refer to www.scfhs.org), trainees will be granted "Certification of Training-Completion" once the following criteria is fulfilled:

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

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

3.3 Final Specialty Examinations

Final specialty examinations are the summative assessment components that grant trainees the specialty's certification. There are two elements:

a) Final written exam: In order to be eligible for this exam, trainees are required to have "Certification of Training-Completion."

b) Final clinical/practical exam: Trainees will be required to pass the final written exam in order to be eligible to sit for the final clinical/practical exam.

Blueprint Outlines: The content of the following table is for demonstration only, please refer to the most updated version published on the SCFHS website.

Blueprint of the final written and clinical/practical exams are shown in the following table:

Example of Final Clinical Exam Blueprint

		DIMENSIONS OF CARE				
		Health Promotion & Illness Prevention 1±1 Station(s)	**Acute** 5±1 Station(s)	**Chronic** 3±1 Station(s)	**Psychological Aspects** 1±1 Station(s)	**# Station(s)**
DOMAINS FOR INTEGRATED CLINICAL ENCOUNTER	Patient Care 7±1 Station(s)	1	4	2		7
	Patient Safety & Procedural Skills 1±1 Station(s)		1			1
	Communication & Interpersonal Skills 2±1 Station(s)			1	1	2
	Professional Behaviors 0±1 Station(s)					0
	Total Stations	1	5	3	1	10

*Main blueprint framework adapted from Medical Council of Canada Blueprint Project

For further details on final exams, please refer to the general bylaws and the executive policy of assessment (available online: www.scfhs.org).

Learning Domain	Summative Assessment Tools	Passing Score
Knowledge	- Final Written Examination	At least borderline pass in each tool in accordance with the standard setting method used by the executive administration of assessment
Skills	- Objective Structured Clinical Examinations (OSCE) - Structured Oral Examinations (SOE)	At least borderline pass 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

The evaluation of each component will be based on the following equation:

Percentage	< 50%	50-59.4%	60-69.4%	>70%
Description	Clear fail	Borderline fail	Borderline pass	Clear pass

To achieve unconditioned promotion, the candidate must score a minimum of "borderline pass" in all five components.

- The program director can still recommend the promotion of candidates if the above is not met in some situations:
  - In case the candidate scored "borderline failure" in one or two components at maximum and those scores do not belong to the same area of assessment (for example: both borderline failures should not belong both to skills)
  - The candidate must have passed all other components and have scored a minimum of clear pass in at least two components.

XII. Program and Courcses Evaluation

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

- Report of the annual trainees' satisfaction survey.
- Reports from trainees' evaluation of faculty members.
- Reports from trainees' evaluation of rotations.
- Reports from the annual survey of program directors.
- Data available from program accreditations.
- Reports from direct field communications with trainees and trainers.

Goal Based Evaluation: The intended milestones achievement will be evaluated at the end of each stage to assess the progress of the curriculum delivery; any deficiency will be addressed in the following stage utilizing the time devoted for trainee-selected topics and professional sessions.

In addition to subject-matter opinion and best practices from benchmarked international programs, SCFHS will apply a robust method to ensure that this curriculum will utilize all data available during the time of revising this curriculum in the future.

XII. Policies and Procedures

This curriculum represents the means and materials outlining learning objectives with which trainees and trainers will interact for the purpose of achieving the identified educational outcomes. Saudi Commission for Health Specialties (SCFHS) has a full set of "General Bylaws" and "Executive Policies" (published on the official SCFHS website) that regulate all processes related to training. General bylaws of training, assessment, and accreditation as well as executive policies on admission, registration, continuous assessment and promotion, examination, trainees' representation and support, duty hours, and leaves are examples of regulations that need to be applied. Trainees, trainers, and supervisors must apply this curriculum in compliance with the most updated bylaws and policies which can be accessed online (via the official SCFHS website).

XIV. Appendices

A. Top Conditions and Procedures in the Specialty

B. Junior-level Competency-Metrics

C. Senior-level Competency-Metrics

D. Knowledge Topics

E. The Most Common Procedures

F. Glossary

G. References

Appendix-A

Top Conditions and Procedures in the Specialty

Top Conditions and Procedures in the Specialty c		
Top Ten Causes of Outpatient Consultations Related to the Specialties in Saudi Arabia		
Disease; Conditions	Relative Frequency	Cumulative Frequency
1. Bulbar urethral strictures	60%	60%
2. Urethral trauma	20%	80%
3. Crippled hypospadias	10%	90%
Top Ten Causes of Inpatient Admissions Related to the Specialties in Saudi Arabia		
Disease; Conditions	Relative Frequency	Cumulative Frequency
1. Bulbar urethral strictures	60%	60%
2. Urethral trauma	20%	80%
3. Crippled hypospadias	10%	90%
Top Ten Procedures/Surgeries Performed by the Specialty		
Name of Procedures/Surgeries	Approximate Frequency	
Anastomotic urethroplasty	40%	
Substitution urethroplasty	30%	
Endoscopic management	20%	

Appendix-B

Junior-level Competency-Metrics to Map Competency, Learning Domain, and Milestones

Training Year level	Competency-Roles (with annotation of learning domains involved: K: Knowledge, S: Skills, A: Attitude)	Professional Activities Related to Urethral Reconstruction			
		Conducting full patient clinical assessment	Endoscopic management of urethral stricture	Surgical management of urethral stricture	Compliance with documentation and proper reporting standards
F1	Medical Expert	Mastering history-taking and physical examination K, S, A	Decision-making and ability to perform urethral incisions and dilation K, S, A	Decision-making and ability to perform urethroplasty K, S	Relevant documentation of daily patient care, prescriptions, discharge summaries K, S, A
	Communicator	Effectively communicating with the patient K, S, A	Effectively communicating with the patient and team members and obtaining proper informed consent K, S, A	Effectively communicating with the patient and team members and obtaining proper informed consent K, S, A	Writing, dictation, and presentation skills K, S
	Collaborator	Teamwork S, A	Seek support from senior physicians when needed, teamwork S, A	Seek support from senior physicians when needed, teamwork S, A	Interprofessional communication A

	Advocate	Holistic approach and preventive medicine K, S, A	Patient safety K, S, A	Patient safety K, S, A	Quality improvement K, S, A
	Leader	Time management S	Ability to lead residents, interns, and students S, A	Ability to lead residents, interns, and students S, A	Quality assurance K, S, A
	Scholar	Evidence-based practice K, S	Evidence-based practice K, S	Evidence-based practice K, S	
	Professional	Confidentiality, demonstrate high standard of professionalism when dealing with the patient A, S	Confidentiality, interprofessional relation A, S	Confidentiality, interprofessional relation A, S	Interprofessional relation A

Appendix-C

Senior-level Competency-Metrics to Map Competency, Learning Domain, and Milestones

Training Year level	Competency-Roles (with annotation of learning domains involved: K: Knowledge, S: Skills, A: Attitude)	Professional Activities Related to Specialty				
		Conducting full patient clinical assessment	Surgical management of urethral trauma	Surgical management of crippled hypospadias	Surgical management of recurrent urethral stricture	Compliance with documentation and proper reporting standards
F2	Professional Expert	Mastering history-taking and physical examination K, S, A	Decision-making and ability to perform surgical management of urethral trauma K, S, A	Decision-making and ability to perform surgical management of crippled hypospadias K, S, A	Decision-making and ability to perform redo-urethroplasty K, S, A	Relevant documentation of daily patient care, prescriptions, discharge summaries K, S, A
	Communicator	Effectively communicating with the patient K, S, A	Effectively communicating with the patient and team members and obtaining proper informed consent K, S, A	Effectively communicating with the patient and team members and obtaining proper informed consent K, S, A	Effectively communicating with the patient and team members and obtaining proper informed consent K, S, A	Writing, dictation, and presentation skills K, S

	Collaborator	Teamwork S, A	Seek support from senior physicians when needed, teamwork S, A	Seek support from senior physicians when needed, teamwork S, A	Seek support from senior physicians when needed, teamwork S, A	Interprofessional communication A
	Advocate	Holistic approach and preventive medicine K, S, A	Patient safety K, S, A	Patient safety K, S, A	Patient safety K, S, A	Quality improvement K, S, A
	Leader	Time management S	Ability to lead residents, interns, and students S, A	Ability to lead residents, interns, and students S, A	Ability to lead residents, interns, and students S, A	Quality assurance K, S, A
	Scholar	Evidence-based practice K, S	Evidence-based practice K, S	Evidence-based practice K, S	Evidence-based practice K, S	
	Professional	Confidentiality, demonstrate high standard of professionalism when dealing with the patient A, S	Confidentiality, interprofessional relation A, S	Confidentiality, interprofessional relation A, S	Confidentiality, interprofessional relation A, S	Interprofessional relation A

Appendix-D

The following is a table with example topics that illustrate the half-day activities spanning over the course of one year (or cycle of teaching if more than one year is required to cover all the topics).

Academic week	Section	Date	Time	Sessions	presenters
1	Fundamentals in surgery	Oct-5	13:00-14:00	Welcoming to the program	Program Director
			14:00-15:00	Case-based study**	A
			15:00-16:00	Approach to bulbar urethral stricture	B
2		Oct-12	13:00-14:00	Complication of urethral stricture	C
			14:00-15:00	Case-based study	D
			15:00-16:00	Non-invasive follow up after urethroplasty	E
3		Ot-19	13:00-14:00	Invasive follow up after urethroplasty	F
			14:00-15:00	Case-based study	B
			15:00-16:00	Types of grafts for urethroplasty	C
4		Oct-26	13:00-14:00	Journal Club*	K
			14:00-15:00	Case-based study	B
			15:00-16:00	Substituation urethroplasty	A

*Journal Club could be done in the evening or during the half-day

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

Appendix-E

The following is a table of the most common procedures:

Common procedures
Urethral dilatation
Visual urethrotomy
Laser urethrotomy
Anastomotic urethroplasty
Bulbar substitution urethroplasty
Pelvic fracture urethral distraction injury repair

Appendix-F

Glossary

Glossary	
Blueprint	Description correlating educational objectives with assessment contents. For example, test blueprint defines the proportion of test questions allocated to each learning domain and/or content.
Competency	Capability to function within a defined professional role that implies entrustment of a trainee by graduation of the program with the required knowledge, skills, and attitude needed to practice unsupervised.
Specialty Core Content (skills, knowledge, and professional attitude)	A specific knowledge, skill, or professional attitude that is specific and integral to the given specialty.
Formative assessment	An assessment that is used to inform the trainer and learner of what has been taught and learned, respectively, for the purpose of improving learning. Typically, the results of formative assessment are communicated through feedback to the learner. Formative assessments

	are not intended primarily to make judgments or decisions (though those can be secondary gains).
Mastery	Exceeding the minimum level of competency to the proficient level of performance indicating rich experience with possession of great knowledge, skills, and attitude.
Portfolio	A collection of evidence of progression toward competency. This may include both constructed components (defined by mandatory continuous assessment tools in curriculum) and unconstructed components (selected by the learner).
Summative assessment	An assessment that describes the composite performance of the development of a learner at a particular point in time; used to inform judgment and make decisions about the level of learning and certification.
Universal topic	A knowledge, skill, or professional behavior that is not specific to the given specialty but universal for the general practice of a given healthcare profession.

Appendix-G

References:

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

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@SchsOrg
www.scfhs.org.sa
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