



الهيئة السعودية للتخصصات الصحية
Saudi Commission for Health Specialties

BURN SURGERY FELLOWSHIP



سُبْحَانَكَ اللَّهُمَّ عَمَّا يُشْرِكُونَ

1-SAUDI FELLOWSHIP

BURN SURGERY and CRITICAL CARE CURRICULUM

This curriculum was prepared by the Specialty's Curriculum Development Committee:

- Dr. Ayman Essam Yamani Chairman
- Dr. Fatimah Al-Sobhi
- Dr. Wissam Majid Hamza Al-Majid
- Dr. Rayan Sulaiman Abdulrahman
- Dr. Mohammed Bassam Ashi

Reviewed and Approved by Specialty's Scientific (Council/Committee) Members:

- Dr. Fatima AlSubhi
- Dr. Wesam AlMajed
- Dr. Mamoon Daghistani
- Dr. Hatan AlJaali
- Dr. Khalid Arab
- Dr. Ali AlMalaq
- Dr. Salah AlDakheel
- Dr. Turki AlTuraiki
- Dr. Mahmoud Faqeeha
- Dr. Sami Alissa

Advisory Committee Members (Curriculum Review Committee members):

- Mazen Qasmi, MBBS, MME, SBEM
- Nada Saleh, MME, MSc, PhD

Approved by Head of Curricula Editorial Board:

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

2-COPYRIGHTS AND AMENDMENTS

All rights reserved. © 2021 Saudi Commission for Health Specialties.

This material may not be reproduced, displayed, modified, distributed, or used in any other manner without prior written permission of the Saudi Commission for Health Specialties, Riyadh, K S A.

Any amendment to this document will be approved by the Specialty Scientific Council and the Executive Council of the commission and shall be considered effective from the date the updated electronic version of this curriculum was published on the commission website, unless otherwise a different implementation date has been mentioned.

Correspondence:

Saudi Commission for Health Specialties

P.O. Box: 94656

Postal Code: 11614

Contact Center: 920019393

E-mail: Curricula@scfhs.org

Website: www.scfhs.org.sa



3-FOREWORD

- 1- Curriculum development involved a systemic process, including the selection of the curriculum committee, curriculum specialist group, and a series of regular meetings with advisory members. After continuous refinement based on feedback from fellows, trainees, and colleagues, a short version of the curriculum template was developed and submitted for scientific committee approval.
- 2- CanMEDS has become the most widely accepted and applied physician competency framework in the world, representing a high standard and comprehensive definition of the abilities needed for all domains of medical practice that contribute directly to the delivery of high-quality healthcare. Therefore, the curriculum of the Burn Fellowship Program was adopted according to the CanMEDS framework. Hence, the trainee functions within the seven roles of CanMEDS: medical experts, communicators, collaborators, leaders, health advocates, scholars, and professionals.
- 3- To implement the burn critical care fellowship curriculum, full support and efforts are needed from the SCFHS, program supervisors, and all members of the multidisciplinary team involved in burn patient care. Periodic review and continuous monitoring of the curriculum are needed for further refinement and quality improvement based on feedback from clinicians, fellows, trainees, and program supervisors.
- 4- Once the program is implemented, we have the responsibility to monitor their delivery, including the environments in which the doctors are trained.

ACKNOWLEDGMENTS

The Burn Surgery and Critical Care Fellowship curriculum development team acknowledges the valuable contributions and feedback from scientific committee members for the development of this program. We would like to extend our sincere appreciation and gratitude to all the members who have been pivotal in the completion of this booklet, especially the Curriculum Group, Curriculum Specialists, and Scientific Council. We would also like to acknowledge that the CanMEDS framework is a copyright of the Royal College of Physicians and Surgeons in Canada, in which many of the descriptions and competencies have been acquired from their resources.



4-TABLE OF CONTENTS

1-SAUDI FELLOWSHIP	3
BURN SURGERY and CRITICAL CARE CURRICULUM	3
2-COPYRIGHTS AND AMENDMENTS	4
3-FOREWORD	5
ACKNOWLEDGMENTS	6
4-TABLE OF CONTENTS	7
5-INTRODUCTION	10
A. Context of Practice	10
B. Goals and objectives	12
C. Responsibility of curriculum implementation:	13
6-Abbreviations	15
7-Program Entry Requirements	17
Admission requirements	17
8-Learning and Competencies	19
I. Introduction to Learning Outcomes and Competency-Based Education	19
II. Program Durations	19
III. Rotations	20
IV. Learning Objectives and Competencies: Roles for program Rotations	22
1- Burn Patient Care	27
2- Wound Management:	29
3- Out-patient management:	30

4- Administration and Quality Improvement	30
5- Cardiovascular Physiology, Pathophysiology and Therapy:	32
6- Inhalation Injury/Respiratory Failure:	33
7- Ethics and Palliative Care	34
8- Gastrointestinal disorders	34
9- Endocrine disorders	35
10- Hematologic disorders	36
11- Infectious Disease	36
12- Neurology	37
13- Nutrition/Metabolic Support:	38
14- Obstetrical disorders	38
15- Pediatrics	39
16- Pharmacology	39
17- Psychosocial	40
18- Rehabilitation:	40
19- Nephrology	41
20- Trauma	41
A. Cardio Vascular Physiology, Pathology, and Therapy	48
B. Cardio Vascular Physiology, Pathology, and Therapy	64
9-Continuum of Learning	87
10- Teaching Methods:	88
1- Program Specific Learning Activities.	88
2-UNIVERSAL TOPICS	102
3-General learning opportunities	103
11-Assessment and Evaluation	105



1-Purpose of evaluation	105
2-Formative assessment	106
3-Summative assessment	107
12-PROGRAM AND COURSES EVALUATION	112
13-Policies and procedures	113
14-Appendices	114
Appendix 1	115
Appendix 2	116
Appendix 3	118
Appendix 4	119
Appendix 5	120
Appendix 6	122
Appendix 7	124
Appendix 8	126
Appendix 9	128
Appendix 10	131
Appendix 11	133
Appendix 12	134
Appendix 13	135

5-INTRODUCTION

A. Context of Practice

- ❖ Burn injuries are among the most common and devastating afflictions of the human body. The treatment of burns has evolved over the centuries from a primary topical therapy consisting of unusual and wonderful topical concoctions in ancient times to one that spans multiple scientific fields of topical therapy, antibiotics, fluid resuscitation, skin excision and grafting, respiratory and metabolic care, and nutrition. Most major advances in burn care have occurred in the last 50 years and are spurred by wars and great fires. The use of systemic antibiotics and topical silver therapy greatly reduces sepsis-related mortality. This, along with the advent of antiseptic surgical techniques, burn depth classification, and skin grafting allowed the excision and coverage of full-thickness burns, which resulted in greatly improved survival rates. Advancements in the methods for assessing the surface area of burns have paved the way for more accurate fluid resuscitation, minimizing the effects of shock, and avoiding fluid overloading. The introduction of metabolic care, nutritional support, and care for inhalational injuries has further improved the outcomes of burn patients.*
- ❖ Burn injuries have a great impact on patients physically, physiologically, and psychologically, and are still among the top causes of death and disability worldwide. Nonfatal burns are a leading cause of morbidity, including prolonged hospitalization, disfigurement, and disability, often resulting in stigma and rejection. In addition to the direct costs of hospital burn management, indirect costs such as lost wages, prolonged care for deformities and emotional trauma, and commitment to family resources



also contribute to the high socioeconomic impact of burn injuries.

- ❖ Despite the rapid growth of health services in Saudi Arabia, the increasing number of specialized modern hospitals, medical centers, and medical cities, and the implementation of many structured training programs by the Saudi Commission for Health Specialties (SCFHS), the management of burns still faces problems regarding the quality and quantity of teaching.
- ❖ Resulting from the crowding of the undergraduate curriculum, plastic surgery has been treated more as a highly specialized and complex reconstructive discipline, resulting in questions over its relevance to medical undergraduates and, consequently, in a reduction in teaching on burns.
- ❖ Currently, there are insufficient data demonstrating the quality and quantity of burn management teaching in medical schools in Saudi Arabia and whether it is sufficient for newly qualified doctors to confidently assess and initially manage patients with burns.
- ❖ A large proportion of burns are observed, assessed, and managed by non-specialists in GP surgeries or accident and emergency departments and are often followed up in hospitals or community wound clinics.
- ❖ It has been recognized that appropriate initial management of burns limits the progression of burn depth; hence, it has a positive impact on patient outcomes. In addition, initial fluid resuscitation is crucial for managing major burns as it aims to maintain vital organ perfusion and aids in preventing the extension of thermal injury by increasing tissue perfusion around the burn. Thus, non-specialists should not be expected to provide specialized care and management of complex burns that should be managed in burn units or centers.

*Burns Trauma. 2014 Oct 25; 2(4):169-80. doi: 10.4103/2321-3868.143620. eCollection 2014.

History of burns: The past, present and the future

B. Goals and objectives

Optimal care of patients with burn injuries requires an interactive multidisciplinary team led by a burn or plastic surgeon skilled and knowledgeable in the complex surgical and medical problems associated with the subspecialty of burn care.

The objectives of the Burn Critical Care Fellowship should be to provide two years of advanced training and education in a teaching role in the management of adult and pediatric patients with burns. The fellowship should have educational, clinical, and administrative resources to develop advanced proficiency in the management of critically ill surgical patients, develop the qualifications necessary to supervise surgical critical care units, and conduct scholarly activities in surgical critical care. An educational program must be an integral part of a fellowship. The accredited Burn Critical Care Fellowship should include in-depth knowledge and experience in resuscitation, critical care management, operative planning, operative management, postoperative care, and the management of late burn care issues, including reconstruction.

Teaching, process improvement, patient safety, and quality improvement should be central tenants of the training process. Whenever possible, completion of a burn research project is recommended.

Successful trainees will have experience with burns, complex wound care treatment and prevention, burn reconstruction, and burn-related research.

The trainees will be able to fulfil the following goals:

14. Provide an understanding of the structure and function of the skin.
15. Provide an in-depth understanding of the pathophysiology of burn wounds, inhalational injuries, systemic response to burns, burn shock resuscitation, wound healing, scarring, and other knowledge is required



for the comprehensive management of burns.

16. Integral involvement in all aspects of patient care and active research.
17. Involvement in all aspects of burn surgery, including acute operative care and reconstruction
18. Show knowledge and skills for the acute and long-term management of burn injuries, scar management, rehabilitation, and reconstruction of burns.
19. Respond professionally to catastrophic fire disaster events.
20. Provide a thorough understanding of the principles of burn anesthesia and highlight the importance of the medico-legal and psychosocial aspects of burn practice.
21. Demonstrate proficient understanding of the use of different types of dressings and tissue-engineered products.
22. Deliver the educational foundation for excellent burn care to physicians, surgeons, and allied professionals practicing within a multidisciplinary burn team.
23. Organize and direct burn services, including the ability to appoint, train, and supervise specialized personnel, establish policies and procedures for the management of patients with burns, and administer the service in coordination with other administrative units.

C. Responsibility of curriculum implementation:

The ultimate goal of this curriculum is to guide trainees to become competent in their specialties. This goal requires a significant amount of effort and coordination from all the stakeholders involved in postgraduate training. As an "adult-learner" trainees must 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. Program directors play a vital role in the successful implementation of this curriculum. Training committee members, particularly program administrators and chief fellows, has a significant impact on program implementation. Trainees should be able to share their responsibility for curriculum implementation. The SCFHS applies the best models of training governance to achieve the best training quality. Academic affairs in training centers and regional supervisory training committees play major roles in training supervision and implementation. The Specialty Scientific (Council) will be responsible for ensuring that the content of this curriculum is constantly updated to match the best-known standards in postgraduate education of their specialty.



6-ABBREVIATIONS

CDG	Curriculum Development Group
SCFHS	Saudi Commission for Health Specialties
BLS	Basic life support
ACLS	Advanced cardiac life support
PALS	Pediatric advanced life support
ATLS	Advanced trauma life support
CBE	Competency-based education
DNR	Do not resuscitate
SIADH	Syndrome of inappropriate antidiuretic hormone
F1	First year of fellowship
F2	Second year of fellowship
CBAHI	Central Board for Accreditation of Healthcare Institutions
JCIA	Joint Commission for International Accreditation
TBL	Team-based learning
PBL	Practice-based learning
DOPS	Direct observation for practical skills
Mini-CEX	Mini clinical evaluation exercise
HDRC	Half day release course
MCQ	Multiple choice question

CBL	Clinic-based learning
SDL	Self-directed learning
PEARLS	Practical evidence about real life situations
CBD	Case-based discussion
SOE	Structured oral exam
PT	Progress test
OSCE	Objective structured clinical examination
ITER	In-training evaluation report
FITER	Final in-training evaluation report



7-PROGRAM ENTRY REQUIREMENTS

Admission requirements

In addition to the SCFHS general training policy, medical and physical fitness, and payment of due tuition fees, the following requirements must be fulfilled by any candidate accepted in the training program:

- 5- All candidates must hold an SCFHS certification, be accredited as a senior registrar by the SCFHS, or be enrolled in an SCFHS-approved training program in general surgery, pediatric surgery, or plastic surgery, and have at least successfully completed the written component of the final examination.
- 6- All candidates have to provide a comprehensive CV with references from two consultants, preferably from the field of plastic surgery. These referees should provide recommendation letters stating the suitability of the candidate for training in burn surgery and critical care.
- 7- All the candidates must provide a letter from a sponsoring organization. This should indicate that the organization pledges its support and sponsored positions of the candidate throughout the total training period of two years.
- 8- All candidates must have valid basic life support (BLS) certification and, preferably, advanced cardiac life support (ACLS), pediatric advanced life support (PALS), and advanced trauma life support (ATLS).
- 9- All candidates must have malpractice insurance.

- 10-The candidate must fulfill all requirements as per the SCFHS admission requirements for postgraduate training programs (scfhs.org.sa).
- 11-Have a licensed to practice medicine in Saudi Arabia.
- 12-Sign an undertaking to abide by the rules and regulations of the SCFHS training program
- 13-Successfully passed the interview for the Fellowship.
- 14-Registered as a postgraduate trainee at the SCFHS.



8-LEARNING AND COMPETENCIES

I. Introduction to Learning Outcomes and Competency-Based Education

Burn critical care fellowship training will be guided by well-defined "learning objectives" that are driven by targeted "learning outcomes" to serve specific specialty needs. Learning outcomes should reflect professional "competencies" and tasks that aimed to be "entrusted" and tasks that trainees aim to entrust upon graduation. This will ensure that graduates meet the expected demands of the healthcare system regarding patient care in relation to their specialties. Competency-based education (CBE) is an "adult-learning" approach based on achieving pre-defined and well-paced learning objectives that driven by complex professional competencies.

Furthermore, CBE emphasizes the critical role of informed judgment in learners' competency progress based on a staged and formative assessment driven by multiple workplace-based observations.

Efforts should be directed to annotate the learning outcomes with the corresponding domains (K=Knowledge, S=Skills, and A-Attitude).

Trainees are expected to progress from novice to mastery levels in a certain set of professional competencies. The CanMEDS principle of competency-based medical education was adopted in this section.

II. Program Durations

Duration of the fellowship

- a) This two- year postgraduate structured educational program in burn surgery and critical care is divided into two parts: junior training year (first year) and senior training year (second year).
- b) The junior training year is designed to provide training in burn critical care and rotation in selected specialties important for burn critical care.
- c) The senior training year, which begins after the fellow passes the recommended evaluation and assessment, is designed to give the fellow a chance to gain progressive responsibility and is expected to conduct burn critical care rounds and make decisions regarding patient management.
- d) Trainees must meet the annually assigned rotation and pass the final assessment exam before moving from one year to another.
- e) The exact order of rotation is determined by the fellowship training committee.
- f) Candidates who pass the final certification exam receive a professionally certified Burn Critical Care Scholarship from the Saudi Commission.

III. Rotations

The fellowship program rotations will be as follows:

First year (F1)

- Nine blocks in the primary service "Burn Surgery and Critical Care" allows trainees to establish good basic knowledge and skills.
- Two blocks in adult general critical care " Surgical, Medical, and Pulmonary ICU"
- One block for anesthesia.

Second year (F2)

- Nine blocks in the primary service "Burn Surgery and Critical Care".
- Two blocks in the Pediatric General Critical Care.



- One block in a selective rotation.

Academic Year	Rotation name	Duration
F1	Burn Critical Care	9 blocks (32 weeks)
	Adult General Critical Care (Elective)	2 blocks (8 weeks)
	Anesthesia (Elective)	1 block (4 weeks)
	Annual Leave	1 block (4 weeks)
F2	Burn Critical Care	9 blocks (32 weeks)
	Pediatric General Critical Care (Elective)	2 blocks (8 weeks)
	Selective rotation	1 block (4 weeks)
	Annual Leave	1 block (4 weeks)

Selective rotations	
Rotation name	Duration
Clinical nutrition	1 block (4 weeks)
Infectious Diseases	1 block (4 weeks)
Rehabilitation	1 block (4 weeks)
Research Methodology	1 block (4 weeks)
Hyperbaric oxygen therapy	1 block (4 weeks)
Pain management	1 block (4 weeks)

Note: Maximum leave is two weeks in each rotation.

IV. Learning Objectives and Competencies: Roles for program Rotations

Comprehensive Burn Critical Care Core Curriculum

Duration:

- Nine blocks (36 weeks) during junior training year (F1)
- Nine blocks (36 weeks) during senior training year (F2)

Description: Trainees need to demonstrate their ability to integrate medical knowledge and skills to provide patient-centric, safe, and quality care. Trainees need to develop skills in consulting and planning care for patients with critical illness based on clinical status, environment, cultural preferences, and available resources. Timely decision-making, with the ability to organize and participate in teamwork, is an essential skill that needs to be developed. Trainees must be able to conduct comprehensive, interdisciplinary rounds independently to evaluate patients, summarize differential diagnoses, and develop problem lists and action plans.

Burn critical care rotation requires training in critical care with the following basic skills:

Medical Expert

- 15-Describe the natural course and clinical expression of critical illness that occur in inpatients, intensive care units, and emergency care units.
- 16-Show an understanding of the pathophysiology of the diseases commonly observed in critically ill patients.
- 17-Demonstrate practical knowledge of critical care by actively participating in the management of critically ill patients.
- 18-Understand the integrated multidisciplinary approach in managing critically ill patients.



- 19-Identify at-risk patients, perform appropriate physical examinations, list problems, and begin treatment under the guidance of senior staff.
- 20-Triage interventions that consider clinical urgency, potential for unexpected outcomes, and available alternatives.
- 21-Show confidence and ease in managing cardiac arrest and acute resuscitation in patients with trauma or acute illness.
- 22-Effectively understand the related medical history and perform appropriate physical examinations for critically ill patients.
- 23-Properly perform common medical and surgical intensive care procedures such as central and arterial line insertion, endotracheal intubation, thoracentesis, and lumbar puncture.
- 24-Appropriately select and interpret laboratory, imaging, and pathologic studies used in the evaluation of pulmonary diseases.
- 25-Construct a comprehensive treatment plan and assess patient response to therapy.
- 26-Interpret diagnostic tests used in the evaluation of ICU patients, such as interpretation of arterial blood gases, chest X-rays, abdominal films, and CT scans.
- 27-Obtain and document patient informed consent and explain the risks, benefits, and reasons for the options discussed.
- 28-Explain to the patients the initial diagnosis, planned diagnostic tests, and recommended intervention.
- 29-Use validated tools effectively to assess function and quality of life, and monitor and coordinate treatments.
- 30-Establishing patient and team member roles for follow-up and counseling sessions of treatment response and providing agreed aftercare may be required, especially during patient transfer to other internal or external facilities.

Communicator

- 1- Use a patient-centric approach to communicate effectively and show empathy and respect for contact with all patients.
- 2- Optimize the physical environment for patient comfort, dignity, privacy, and security.
- 3- Communicate well with patients and their families and host services on their daily progress and notify them of any adverse events and procedural complications.
- 4- Keep in touch with the ICU team (nurse, resident, or caregiver) regarding patient care issues.
- 5- Involve patients with respect and non-judgment regarding religious and cultural values and prejudices.
- 6- Demonstrate counseling skills and decision aids to help patients or patients' decision makers make informed choices or give informed consent.
- 7- Communicate the views and concerns of patients and their families to your doctor reliably and accurately.
- 8- Demonstrate the ability to document medical history, physical progress, discharge records, etc.
- 9- Accurately and quickly document clinical encounters in accordance with legal and regulatory requirements.
- 10- Share information with patients and other important people in a way that respects patient privacy and confidentiality.
- 11- Participate in end-of-life discussions with the intensive care team and family.



Collaborator

- 1- Participate in effective teamwork, respect all team members and appropriately manage any conflicts about the shared intra –or inter-professional responsibilities.
- 2- Recognize the differences, misunderstandings, and restrictions regarding the views and opinions of others.
- 3- Demonstrate effective collaboration with other healthcare provider
- 4- Show awareness of the impact of diagnostic and treatment recommendations on the healthcare system.
- 5- Demonstrate effective and safe transfer within the facility or to another setting or care level or transfer of care responsibilities.

Leader

- 1- Establish a teamwork culture that identifies, supports, and effectively deals with colleagues in need during patient care.
- 2- Efficiently perform the patient care tasks assigned during the rounds.
- 3- Recognize your personal limits and seek help as needed.
- 4- Recognize and respond professionally to the non-professional and unethical behavior of other employees.
- 5- Use resources effectively to balance patient care, training, and personal activities.
- 6- Wisely arrange and allocate health resources.
- 7- Work efficiently and effectively in the medical system.
- 8- Use information technology for optimal patient care.
- 9- Understand the essential requirements of the ICU design.

Health Advocate

- 1- Identify the major health determinants that affect the patient.

- 2- Effectively contribute to improving the health of patients and communities.
- 3- Identify and address issues for which health promotion is appropriate.
- 4- Patient and family education on the importance of long-term health behavior and promotion of preventive health care.
- 5- Respect and strengthen patient autonomy.
- 6- Promote fair access to health care.
- 7- Apply the principles of quality improvement and quality assurance.

Scholar

- 1- Create, monitor, and revise your personal learning plan with meaningful feedback and ratings to facilitate intensive learning.
- 2- Set, rate, and prioritize individual learning goals.
- 3- Use assessment tools and practices in a particular learning context.
- 4- Recognize your own knowledge gaps in meeting clinical and other professionals.
- 5- Incorporate evidence into your decisions.
- 6- Promote a safe and secure learning environment and use information technologies to support patient care decisions, and drive patient and clinician education.
- 7- Integration and application of knowledge from multiple research sources in the care of critically ill patients.
- 8- Analyze clinical experience and apply systematic methodologies for improvement.
- 9- Learn from mistakes and maintain the willingness to use them to improve care systems and processes.
- 10-Ask medical and scientifically relevant questions open to scientific research and answer criticisms of given scientific questions.



Professional

- 1- Demonstrate competence, quality improvement, and commitment to maintaining and improving patient safety.
- 2- Recognize the importance of patient advantage, privacy, and autonomy. Informed consent; and respect and care for all people equally.
- 3- Respect the patient, the patient's family, employees, and colleagues.
- 4- Ethical approach to reporting all major clinical findings to physician treatment and referrals, followed by clinical questions, laboratory tests, and other patient care issues to identify potential conflicts of interest.
- 5- Show honesty and openness when discussing treatment options and respect the cultural differences of the patients.
- 6- Respond quickly to calls, pages and messages.
- 7- Recognize and respond professionally to the non-professional and unethical behavior of other employees.
- 8- Promote a teamwork culture that recognizes, supports, and effectively deals with colleagues in need during patient care.
- 9- Indicate a commitment to the disclosure and impact of error or adverse events and show your personal responsibilities, including personal care, to provide the best service to others.

Required Domains

By the end of the training in comprehensive burn critical care rotation, the trainee should develop competency in the following domains:

1- Burn Patient Care

- Understand the history of burn treatment.
- Understand the concept of the interdisciplinary approach to burn management and the role of all team members.

- Show the necessary knowledge about the epidemiological, demographic, and outcome characteristics of burns.
- Understand all aspects of burn prevention.
- Show knowledge and demonstrate competency in fire management in the event of a disaster or crisis.
- Demonstrate proficiency in preclinical management and transport of burn treatment.
- Demonstrate knowledge and efficiency in emergency management of burns.
- Understand the pathophysiology of burn shock and burn edema.
- Show knowledge of fluid resuscitation and early management.
- Understand systemic inflammatory response syndrome and show knowledge of multiple organ dysfunction syndrome.
- Show knowledge and understanding of immune responses and intervention strategies.
- Understand all aspects of the hematological response to burns.
- Demonstrate knowledge and understanding of vitamin, mineral and trace element homeostasis after severe burns
- Understand the modulation of the hyper-metabolism response after burns.
- Show knowledge and understanding of the etiology and prevention of multiple organ failure.
- Demonstrate knowledge and understanding of electrical injury and aspects of their management.
- Understand different types of chemical burns and their management.
- Understand all aspects of radiation / cold related injuries.
- Show knowledge and understanding of all phases of wound healing.
- Show knowledge and understanding of the pathophysiology of burn scars.
- Show knowledge and understanding of hypertrophic scars and keloids



and their management.

- Demonstrate the ability to treat outpatient burns.
- Demonstrate knowledge and skills in treating burn infections.
- Show knowledge and understanding of anesthesia for burn patients.
- Show knowledge and understanding of all aspects perioperative care for burn patients.
- Demonstrate knowledge and understanding of functional outcomes and disability assessment.
- Show knowledge and understanding of an overview of burn reconstruction.
- Demonstrate understanding and skills in reconstruction of burned hands.
- Demonstrate skills in management of post- burn sequelae of head and neck.
- Demonstrate understanding and ability in reconstruction of burnt scalp.
- Demonstrate skills in the reconstruction of contracture deformities of joints.
- Demonstrate knowledge and skills in burned breast reconstruction.
- Demonstrate skills of reconstruction of burned feet and ankles.

2- Wound Management:

- a) Show detailed knowledge about the assessment of the extent and depth of the injury.
- b) Show an understanding of the indications and technique of escharotomy in different body regions.
- c) Demonstrate the knowledge and skills of all aspects of burn wound excision.
- d) Understand the advantages and disadvantages of tangential and fascial resections.

- e) Understanding different aspects of the management of burnt hands, face, feet, and perineum.
- f) Understand wound management in children and the elderly.
- g) Show your understanding of a variety of wound-covering options, such as allogeneic transplants, xenografts, cultured skin products, and skin substitutes.
- h) Show an understanding of various burn antimicrobial dressings, including indications and contraindications.
- i) Show the skills and proficiency of burn tangential and fascial excision.
- j) Demonstrate understanding and proficiency in technology to maximize functional and aesthetic results.
- k) Demonstrate understanding and skill in dealing with chemical and electrical damage.
- l) Demonstrate the knowledge and skills needed to diagnose and treat life-threatening skin problems, such as toxic epidermal necrolysis, epidermolysis bullosa, pemphigus, burn syndrome, and necrotizing fasciitis.

3- Out-patient management:

- a) Competent treatment for post-grafting patients includes outpatient therapy, immobilization, and pressure therapy.
- b) Show a good understanding of wound maturation and hypertrophic scars.
- c) Properly treat pain and itching.
- d) Show a good understanding of occupational therapy-related topics such as returning to work or school and the need for work retraining.

4- Administration and Quality Improvement

- a) Show proficiency in implementing clinical protocols for the care of critically ill patients



- b) Demonstrate the ability to monitor patient outcomes and implement methods for reporting complications.
- c) Show that you understand the differences between protocols and guidelines, and that you are proficient in their development and implementation.
- d) Demonstrate an understanding of institutional, regional, and national civil protection protocols.
- e) Show an understanding of ICU management, including costs, fees, proper coding, billing, and collection monitoring.
- f) Demonstrate an understanding of national regulations and laws governing critical care practices and medical law issues.
- g) Show an understanding of the criteria used to recruit, promote, and maintain critical care staff.
- h) Show an understanding of the importance of an interdisciplinary approach and the role of the intensive care unit in the medical system.
- i) Show that you are proficient in effective communication strategies and leadership skills such as dispute resolution and management strategies.
- j) Build effective relationships with counselors, surgeons, nurses, and other healthcare providers
- k) Show solid ethical principles.
- l) Show an understanding of the need to develop and implement effective quality improvement measures and patient safety protocols.
- m) Show understanding of national and international quality improvement programs (CBAHI and JCIA).

5- Cardiovascular Physiology, Pathophysiology and Therapy:

- a) Demonstrate competency and skills in targeted resuscitation, including optimization of tissue oxygenation in shock patients, and understand the major differences between hypovolemic, hemorrhagic, and neurogenic shock.
- b) Demonstrate knowledge and skills in interpreting and applying data from noninvasive and invasive diagnostic and monitoring techniques.
- c) Demonstrate the ability to select and effectively apply various inotropic and vasoactive agents in patients with different types of shock (cardiogenic, neurogenic, septic, or mixed).
- d) Demonstrate the ability to select and use appropriate mechanical support for patients with cardiogenic shock.
- e) Demonstrate the ability to interpret X-rays, such as chest X-rays, computed tomography (CT) scans, arteriography, and magnetic resonance scans, and apply the data to the management of patients with cardiovascular disease.
- f) Demonstrate knowledge and skills in diagnosing and managing cardiac arrhythmias and ischemic events.
- g) Demonstrate knowledge and skills in all aspects of advanced cardiac life support (ACLS).
- h) Demonstrate knowledge and understanding of diagnosing and treating arterial diseases of various etiologies (thrombosis, embolism, osteoarthritis, aneurysms, etc.).
- i) Show understanding of the proper management of hypertension in different patient populations.



- j) Demonstrate the appropriate selection and application of various thromboembolic event prevention strategies such as sequential compression devices, anticoagulants, and inferior vena cava filters.
- k) Show efficiency in diagnosing compartment syndrome of the limbs, abdomen, and trunk and the ability to perform escharotomy, fasciotomy, and decompression laparotomy.
- l) Show an understanding of the severity of and ability to manage critically ill patients with multiple organ failure.

6- Inhalation Injury/Respiratory Failure:

- a) This indicates that you are proficient in interpreting data from different diagnostic tools, such as arterial blood gases and radiological data (chest X-rays and CT scans) and applying that data to clinical management plans.
- b) Proof of competence in the diagnosis and treatment of inhalation injuries and carbon monoxide poisoning.
- c) Familiarity with diagnosis and management of acute exacerbations of COPD and inhalation injuries.
- d) Demonstrate ability in diagnosing and treating pulmonary dysfunction in critically ill patients.
- e) Proficiency in diagnosing and treating patients with pulmonary infections, such as pneumonia, ventilator-acquired pneumonia (VAP), pyogenic abscess, pulmonary abscess, trachea-bronchitis, and proficiency in interpreting sputum culture.
- f) Show that you are proficient in the proper use of ventilators and other devices to assist in gas exchange.
- g) Show that you are proficient in the proper use of various weaning strategies for ventilated patients.

7- Ethics and Palliative Care

- a) Show that you are aware of death and have different individual feelings, attitudes, and beliefs about death.
- b) Identify ways to incorporate ethical and palliative care into curative care.
- c) Knowledge and evidence of competence in the non-pharmacological and pharmacological treatment of pain and other related symptoms during serious and terminal illness (e.g., nausea, dyspnea, cough, hypersecretion).
- d) Empathize with the patient and his family during a serious illness.
- e) Demonstrate the skills needed to resolve conflicts between family members and care providers.
- f) Show reasonable concern about patient privacy.
- g) Demonstrate effective communication between the patient and his / her family.
- h) Show an understanding of major religions, cultures, traditions, beliefs, customs, and their impact on medical decision-making among ethnic groups.
- i) Demonstrate logical, ethical, and fair distribution of limited resources.
- j) Show an understanding of resuscitation prohibition guidelines and end-of-life issues.
- k) Understand organ donation options and protocols.

8- Gastrointestinal disorders

- a) Demonstrate knowledge and ability to distinguish between upper and lower gastrointestinal (GI) bleeding sources
- b) Demonstrate proper assessment and resuscitation of patients with gastrointestinal bleeding.



- c) Show knowledge about the indications for emergency endoscopy of upper gastrointestinal bleeding.
- d) Describe endoscopic techniques for controlling different causes of upper gastrointestinal bleeding.
 - I. Injection
 - II. Sclerosis
 - III. Heating probe
 - IV. Clip / banding
- e) This demonstrates an understanding of the indications for bleeding scans and arteriography to locate gastrointestinal bleeds.
- f) Familiarity with intervention techniques that may be performed during angiography, such as catheter-based injection and embolization, to control bleeding.
- g) Understand different causes and treatment options of liver cell failure.
- h) Understand the causes and treatment of hepatic encephalopathy.
- i) Show the ability to manage hepato-renal syndrome.
- j) Show understanding and proficiency in diagnosis and treatment of ileus in critically ill patients.
- k) Show knowledge about how to diagnose and treat pancreatitis.

9- Endocrine disorders

- a) Demonstrate knowledge and ability to evaluate and manage critically ill patients with thyroid, parathyroid, pancreatic, and adrenal disorders.
- b) Demonstrate knowledge and ability in assessing and managing hyperglycemia and diabetes.
- c) Show knowledge about the assessment and management of endocrine disorders.
- d) Demonstrate an understanding of the role of the neuroendocrine axis in responding to stress.

10- Hematologic disorders

- a) Knowledge and proficiency in assessing white blood cells (WBC), red blood cells (RBC), and platelet disorders in critically ill patients
- b) Show knowledge and skills in assessing and treating bleeding and coagulopathy in critically ill patients
- c) Demonstrate knowledge and ability to manage critically ill patients with leukocyte, red blood cell, and platelet disorders
- d) Demonstrate knowledge and skills in the diagnosis and management of patients with heparin-induced thrombocytopenia and thrombosis (HITT).

11- Infectious Disease

- a) Demonstrate practical skills for assessing patients with fever in the surgical intensive care unit.
- b) Diagnosis, management, and understanding of the differences between sepsis, systemic inflammatory response system (SIRS), septic shock, and multiple organ failure.
- c) Show knowledge of strategies for avoiding nosocomial complications.
- d) Demonstrate an understanding of appropriate perioperative antibiotic prophylaxis strategies.
- e) Understand the prevention, diagnosis, and treatment of VAP, central venous infections, and urinary tract infections.
- f) Demonstrate practical skills in the care and management of patients with necrotic soft tissue infections.
- g) Understand invasive burn sepsis and infections in patients with burns
- h) Show an understanding of the diagnosis and treatment of peritonitis.
- i) Show that you understand the differences between the prophylactic, empirical, and therapeutic antibiotic indications and the choice of drug that is appropriate for a particular clinical situation.



- j) Monitor antibiotic levels and demonstrate the ability to make appropriate dose adjustments.
- k) Show knowledge to identify sources of non-bacterial infections in ICU patients such as fungi, viruses, and other abnormal pathogens.
- l) Understand the special considerations of patients who are immunocompromised by the disease process (HIV infection, diabetes, cirrhosis, etc.) and medications (steroids, chemotherapy, rejection inhibitors, etc.).
- m) Show knowledge of nosocomial infection control methods and isolation polices.
- n) Demonstrate an understanding of safety precautions for your healthcare provider.
- o) Show an understanding of multi-resistance

12- Neurology

- a) Demonstrate proper and timely assessment and management of patients with anoxic encephalopathy.
- b) Demonstrate the proper use and interpretation of brain and spinal cord imaging.
- c) Demonstrate understanding and proficiency in proper assessment and management algorithms for patients with spinal cord injury (SCI), including airway and hemodynamic management.
- d) Proper understanding and interpretation of information from intracranial pressure (ICP), oxygenation of brain tissue, and monitoring of cerebral blood flow.
- e) Demonstrate knowledge and ability in the assessment and management of severe closed-head trauma and the necessary parameters to minimize the risk of secondary brain damage
- f) Knowledge of the diagnosis and management of sodium homeostasis is

associated with neurological disorders such as diabetes insipidus, inappropriate syndrome of antidiuretic hormone (SIADH), and brain salt deficiency.

- g) Show appropriate consultation with physiotherapy and rehabilitation specialists and rehabilitation facilities.
- h) Indicate proper implementation of brain death certification.
- i) Show the basic principles of support for future organ donors.

13- Nutrition/Metabolic Support:

- a) Show proficiency in assessing and continuing to assess the nutritional needs of critically ill surgical patients
- b) Demonstrate the ability of enteral and parenteral nutrition management.
- c) Show familiarity with the placement of the nasal gastric and nasal feeding tubes.
- d) Show familiarity with the placement of percutaneous endoscopic gastrostomy.
- e) Show understanding of the role of micronutrients in the nutritional support of critically ill patients.
- f) Understand how to promote metabolic support and reduce catabolism.
- g) Show knowledge about how to prevent and treat gastrointestinal bleeding.
- h) Shows the ability to deal with electrolyte abnormalities.

14- Obstetrical disorders

- a) Evidence of knowledge about the treatment of serious illnesses in pregnant patients.
- b) Demonstrate the ability to properly select X-ray tests to maximize maternal and fetal health when treating critically ill pregnant women.



- c) Understand the physiological changes associated with pregnancy, childbirth, and shortly after childbirth the respiratory, cardiovascular, renal, and gastrointestinal changes.
- d) Understand how physiological changes during pregnancy affect ICU management, including hemodynamic and lung monitoring, pharmacological concerns, and imaging choices.
- e) Understand how pregnancy and the puerperium affect the choice of different drugs.

15- Pediatrics

- a) Familiarity with the initial assessment, triage, and resuscitation of the injured patient as described in the PALS course (or equivalent course).
- b) Evidence of appropriate and timely assessment of pediatric patients with acute respiratory distress, including asthma.
- c) Demonstrate an appropriate and timely assessment of shocked pediatric patients.
- d) Understand how the need for infant resuscitation differs from that of adults.
- e) Show knowledge of infant intubation techniques.
- f) Demonstrate knowledge of vascular access technology in infants and children.
- g) Demonstrate knowledge of ventilation management strategies for children.
- h) Show knowledge of signs and history consistent with child abuse and appropriate intervention.

16- Pharmacology

- a) Understand selection and adjustment of the appropriate drug dose based on the principles of drug absorption, distribution, metabolism, and

excretion.

- b) Demonstrate proper identification and management of potential drug interactions.
- c) Show an understanding of choosing cheaper medicines.

17- Psychosocial

- a) Show an understanding of the role of psychological stress in families and patients.
- b) Shows an understanding of the role of social welfare, psychologists, psychiatrists, and mental guidance in the treatment of burn patients.
- c) Demonstrate the ability to identify abuse of children and the elderly.
- d) Demonstrate the ability to identify substance abuse and manage possible interventions.
- e) Show your understanding of the need for efforts to return to society, work, and school.
- f) Understand the Do Not Resuscitate Policy (DNR), including discussing issues with family and patients.
- g) Demonstrate understanding and ability to promote family-centric care.
- h) Demonstrate proficiency in pain and anxiety management, including post-wound healing background, treatment, breakthrough, neuropathic pain, pruritus, and opioid arrest treatment.

18- Rehabilitation:

- a) Understand that by receiving burn rehabilitation therapy, we showed an understanding of the need for early and continuous intervention in the recovery of critically ill patients.
- b) Show that you understand the principles of proper joint positioning, splinting, and pressure therapy.



- c) Show an understanding of post-burn contractures in different areas and the surgical procedures required for their reconstruction.
- d) Demonstrate an understanding of inpatient rehabilitation criteria, including intensive requirements for patients with hypoxic brain injury due to inhalation injury.

19- Nephrology

- a) Show competency in managing oliguria in critically ill patients.
- b) Show evidence of proper management of electrolyte, vascular volume status, and drug dosage in Patients with Acute Kidney Injury
- c) Knowledge of the nutritional needs of patients with acute and chronic renal failure in the intensive care unit.
- d) Describe the relative and absolute indications for renal replacement therapy.
- e) Understand the types of dialysis and the basis of electrolyte replacement in renal patients.

20- Trauma

- a) Familiar with the initial assessment, triage, and resuscitation of the injured patient as described in the ATLS course.
- b) Show that you understand the differences and similarities between patients with isolated burns and those with blunt or penetrating trauma.
- c) Show proficiency in airway evaluation and management, such as rapid sequence intubation (RSI) and cricothyroidotomy.
- d) Show familiarity with procedures such as needle chest decompression and chest tube insertion.
- e) Familiarity with the proper use of crystalline fluids, colloids, and blood products for resuscitation.

- f) Understand the clinical signs and laboratory data indicating resuscitation endpoints, such as base defecation, lactate levels, and global variables of oxygen supply and consumption.
- g) Familiarity with the types and placement of vascular access and the use of massive transfusion.
- h) Show proficiency in diagnosing intra-abdominal injuries.
- i) Demonstrate ability in detection and management of abdominal compartment syndrome.
- j) Evidence of competence in diagnosing and treating pelvic fractures, including detection of associated injurie

Adult Critical Care Rotation

Duration: Two blocks (eight weeks) during the junior training year (F1).

Description: Trainees need to demonstrate their ability to integrate medical knowledge and skills to provide patient-centric, safe, and quality care. Trainees need to develop skills in consulting and planning care for patients with critical illness based on clinical status, environment, cultural preferences, and available resources. Timely decision-making, with the ability to organize and participate in teamwork, is an essential skill that needs to be developed.

The trainee should be able to conduct comprehensive and multidisciplinary rounds independently to assess patients, synthesize differential diagnoses, and create problem lists and action plans.

Adult critical care rotation should provide critical care medicine physicians with the following basic competencies:

Medical Expert

- 1- Describe the natural course and clinical symptoms of intensive care units that occur in inpatients, intensive care units, and emergency care units.
- 2- Understand the pathophysiology of common illnesses in critically ill



patients.

- 3- Demonstrate practical knowledge of critical care by actively participating in the management of critically ill patients.
- 4- Understand the integrated nature of the disease and the concept of interdisciplinary approach in managing critically ill patients.
- 5- Identify at-risk patients, perform appropriate physical examinations, list problems, and begin treatment under the guidance of senior staff.
- 6- Prioritize and summarize approaches for assessing common symptoms in critical care centers.
- 7- Triage interventions that consider clinical urgency, potential for unexpected outcomes, and available alternatives.
- 8- Familiarize yourself with the management of cardiac arrest and acute resuscitation for patients with trauma or acute illness.
- 9- Effectively understand the related medical history and perform appropriate physical examinations for critically ill patients.
- 10-Demonstrate the ability to perform common medical and surgical intensive care unit procedures such as central and arterial line insertion, oral tracheal intubation, puncture, thoracocentesis, and lumbar puncture.
- 11-Appropriate selection and interpretation of laboratory, imaging, and pathological studies used to assess lung disease.
- 12-Develop a comprehensive treatment plan to assess the patient's response to treatment.
- 13-Effectively interpret the diagnostic tests used to evaluate critical care center patients, such as interpretation of arterial blood gases, chest X-rays, abdominal films, and computed tomography (CT) scans.
- 14-Demonstrate the ability to critically evaluate and cite relevant literature.
- 15-Understand the procedure or intervention needed and obtain a patient informed consent including the risks, benefits, and reasons for the options discussed.

16-Efficiently explain to the patients the possible diagnosis, the planned diagnostic tests, and the recommended treatments.

17-Effectively use validated tools to assess function and quality of life, and monitor and coordinate treatments.

18-Show an understanding of all concepts of safe patient transfer to other facility.

Communicator

1- Use a patient-centric approach to communicate effectively and show empathy and respect for contact with all patients.

2- Optimize the physical environment for patient comfort, dignity, privacy, and security.

3- Communicate well with patients and their families and host services on their daily progress.

4- Keep in touch with the ICU team (nurse, resident, or caregiver) regarding patient care issues.

5- Involve patients with respect and non-judgment regarding religious and cultural values and prejudices.

6- Recognize the patient's nonverbal communication behavior and respond appropriately.

7- Demonstrate counseling skills and decision support to help patients or their decision makers make informed decisions and provide informed consent.

8- Demonstrate effective listening and speaking skills with patients, families, and other members of the healthcare team.

9- Communicate the views and concerns of the patient and her family to your doctor reliably and accurately.

10-Demonstrate documentation ability, including medical history, physical, progress, and discharge notes.



11-Accurately and appropriately notify patients and their families of adverse events and procedural complications.

12-Accurately and timely document clinical encounters in accordance with legal and regulatory requirements.

13-Share information with patients and other important people in a way that respects patient privacy and confidentiality.

14-Participate in end-of-life discussions with the intensive care team and family.

Collaborator

1- Participate in effective teamwork and respect all members of the team, identify, and negotiate conflicts and shared responsibilities.

2- Recognize your differences, misunderstandings, and restrictions, regarding the views and opinions of others.

3- Discuss how the healthcare system affects the management of intensive care for inpatients.

4- Demonstrate effective collaboration with other healthcare providers.

5- Show awareness of the impact of diagnostic and treatment recommendations on the healthcare system.

6- Demonstrate effective and safe transfer within the facility or during deregistration to another setting or care level or transfer of care responsibilities.

Leader

1- Foster a teamwork culture that identifies, supports, and effectively deals with colleagues in need during patient care.

2- Efficiently perform the patient care tasks assigned during the rounds.

3- Recognize your personal limits and seek help as needed.

4- Recognize and respond professionally to the non-professional and unethical behavior of other employees

- 5- Use resources effectively to balance patient care, training, and personal activities.
- 6- Understand and judiciously allocate health care resources. 6 We will wisely understand and allocate health resources.
- 7- Work efficiently and effectively in the medical system.
- 8- Use information technology properly for optimal patient care and personal grants.
- 9- Show that you understand the physical requirements of the ICU design.

Health Advocate

- 1- Identify the major health determinants that affect the patient.
- 2- Effectively contribute to improving the health of patients and communities.
- 3- Identify and address issues for which health promotion is appropriate.
- 4- Patient and family education on the importance of long-term health behavior and promotion of preventive health care (e.g., quitting, preventive health care, vaccination, exercise, diet).
- 5- Respect and strengthen patient autonomy.
- 6- Promote fair access to health care.
- 7- Apply the principles of quality improvement and quality assurance.

Scholar

- 1- Create, monitor, and revise your personal learning plan with meaningful feedback and ratings to facilitate intensive learning.
- 2- Set, rate, and prioritize individual learning goals.
- 3- Use assessment tools and practices in a particular learning context.
- 4- Recognize your own knowledge gaps in meeting clinical and other professionals.
- 5- Incorporate evidence into your decisions.



- 6- Promote a safe and secure learning environment for patients.
- 7- Properly use information technologies to support patient care decisions, and drive patient and clinician education.
- 8- Show a positive attitude towards teamwork and encourage collaborative learning.
- 9- Integration and application of knowledge from multiple research sources in the care of critically ill patients.
- 10-Analyze clinical experience and apply systematic methodologies for improvement.
- 11-Learn from mistakes and use them to cultivate and maintain the willingness to improve care systems and processes.
- 12-Ask medical and scientifically relevant questions open to scientific research and answer criticisms of given scientific questions.

Professional

- 1- Demonstrate competence, quality improvement, and commitment to maintaining and improving patient safety.
- 2- Recognize the importance of patient advantage, privacy, autonomy and informed consent; respect and care for all people equally.
- 3- Respect the patient, the patient's family, employees, and colleagues.
- 4- Accurately report all clinical findings to the treating physician followed by clinical questions, laboratory tests, and other patient care issues to identify potential conflicts of interest.
- 5- Demonstrate integrity, honesty, and openness in the discussion of therapeutic options and respect patient's preferences and cultural differences.
- 6- Respond to phone calls, pages, and messages in a timely manner.
- 7- Recognize and professionally respond to unprofessional and unethical behaviors in other staff.

- 8- Promote a teamwork culture that recognizes, supports, and responds effectively to colleagues in need during patient care.
- 9- Demonstrate commitment to the disclosure of errors or adverse events and their impact. Show your responsibilities, including personal care, to serve others in the best possible manner.

Required Domains

At the end of this rotation training, trainees need to develop their abilities in the following areas.

A. Cardiovascular Physiology, Pathology, and Therapy

1. Cardiovascular Physiology, Pathophysiology, and Therapy:

- a) Demonstrate knowledge and competency in goal-directed resuscitation, such as optimization of tissue oxygen delivery in patients with shock, and understand the major differences between hypovolemic, hemorrhagic, and neurogenic shock.
- b) Demonstrate knowledge and competency in the interpretation and application of data from noninvasive and invasive diagnostic and monitoring techniques (e.g., echocardiography, arterial catheters, central venous pressure monitors, pulmonary artery catheters, tissue perfusion monitors, and other methods for measuring cardiac performance).
- c) Proof of ability to properly select and effectively use various inotropic and vasoactive agents in patients with different types of shock (cardiogenic, neurogenic, septic, or mixed).
- d) Demonstrate proficiency in selecting and using appropriate mechanical aids in patients with cardiogenic shock



- e) Demonstrate the ability to interpret X-rays, such as chest X-rays, computed tomography (CT) scans, arteriography, and magnetic resonance scans, and apply the data to the management of patients with cardiovascular disease.
- f) Develop the skills to perform cardiovascular procedures, including:
 - Ultrasound for diagnosing pericardial tamponade
 - Pericardiocentesis
 - Placement of arterial and venous catheters for hemodynamic monitoring and treatment
- g) Demonstrate knowledge and ability in diagnosing and managing cardiac arrhythmias and ischemic events
- h) Demonstrate knowledge and ability to properly apply advanced cardiac life support (ACLS) H. Demonstrate knowledge and ability to properly apply advanced cardiac life support (ACLS)
- i) Understand the diagnosis and treatment of arterial diseases due to various etiologies (thrombosis, embolism, osteoarthritis, aneurysms, etc.).
- j) Show efficiency in the proper management of hypertension in different patient populations.
- k) Understand the appropriate selection and application of various thromboembolic event prevention strategies such as sequential compression devices, anticoagulant dosing, and inferior vena cava filters.
- l) Evidence of the ability to diagnose compartment syndrome of the limbs, abdomen, and trunk, and the ability to perform escharotomy, fasciotomy, and decompression laparotomy.
- m) Show understanding of the severity and treatment ability of critically ill patients with multiple organ failure.

2. Inhalation Injury/Respiratory Failure:

- a) Indicate that you are proficient in interpreting and using arterial blood gas data.
- b) Demonstrate the ability to interpret X-ray data such as chest X-rays and CT scans, and apply that data to clinical management plans.
- c) Show knowledge of the properties and advanced methods for intubation into difficult airways.
- d) Proof of competence in the diagnosis and treatment of inhalation injuries and carbon monoxide poisoning.
- e) Familiarity with diagnosis and management of acute exacerbations of COPD and inhalation injuries.
- f) Show proficiency in airway management, such as intubation, tracheostomy, endotracheal tube, bronchoscopy, and pleural drainage.
- g) Demonstrate the ability to withdraw from mechanical ventilation, suction techniques, airway monitoring, and intrathoracic pressure monitoring.
- h) Demonstrate ability in diagnosing and treating pulmonary dysfunction in critically ill patients.
- i) Demonstrate knowledge and competency in diagnosing and treating patients with lung infections such as pneumonia, VAP, empyema, lung abscess, and trachea-bronchitis, and in interpreting sputum cultures.
- j) Show that you are proficient in the proper use of ventilators and other devices to assist in the gas exchange and interpretation of blood gas.
- k) Show that you are proficient in the proper use of various weaning strategies in patients wearing ventilators.

3. Ethics and Palliative Care

- a) Show that you are aware of different human responses, feelings, attitudes, and beliefs about death.
- b) Identify ways to incorporate ethical and palliative care into curative care



- c) Knowledge of evidence and ability to deal with non-pharmacological and pharmacological management of pain and other related end-of-life symptoms such as nausea, dyspnea, cough, and excess secretions.
- d) Show an understanding of all aspects of pain management and other symptoms during serious illness.
- e) Empathize with the patient and the family during a serious illness.
- f) Demonstrate the skills needed to resolve conflicts between family members and care providers.
- g) Show reasonable concern about patient privacy.
- h) Demonstrate effective communication between the patient and his / her family.
- i) Show an understanding of major religions, cultures, traditions, beliefs, customs, and their impact on medical decision-making among ethnic groups.
- j) Show an understanding of “Do not resuscitate” (DNR) guidelines and end-of-life issues.
- k) Understand organ donation options and protocols.

4. Gastrointestinal disorders

- a) Knowledge and ability to distinguish between upper and lower gastrointestinal bleeding sources.
- b) Understand all aspects of management of a patient with gastrointestinal bleeding.
- c) Show an understanding of the indications for emergency endoscopy of upper gastrointestinal bleeding.
- d) Describe all options for endoscopic techniques for the management of various causes of upper gastrointestinal bleeding.
 - I. Injection
 - II. Sclerosis

III. Heating probe IV.

IV. Clip / banding

- e) Demonstrate an understanding of the indications for bleeding scans and arteriography to locate gastrointestinal bleeds.
- f) Familiarity with intervention techniques that may be performed during angiography to control gastrointestinal bleeding, such as catheter-based injections and embolization.
- g) Explain the cause and treatment of liver failure.
- h) Explain the cause and treatment of hepatic encephalopathy.
- i) Indications for the Sengstaken-Blakemore probe for upper gastrointestinal bleeding and its placement.
- j) Show understanding of the acute treatment for bleeding esophageal varices?
- k) Show the ability to manage hepatorenal syndrome.
- l) Show understanding and proficiency in the diagnosis and treatment of ileus in critically ill patients
- m) Demonstrate the knowledge and ability to manage patients with intestinal ischemia.
- n) Show knowledge about the assessment and treatment of pancreatitis.

5. Bottom of Form

6.

7. Endocrine disorders

- a) Demonstrate knowledge and ability to evaluate and manage critically ill patients with thyroid, parathyroid, pancreatic, and adrenal disorders.
- b) Demonstrate knowledge and ability in assessing and managing hyperglycemia and diabetes.
- c) Show knowledge about the assessment and management of different



endocrinal disorders.

- d) Demonstrate an understanding of the role of the neuroendocrine axis in responding to stress.

8. Hematologic disorders

- a) Knowledge and proficiency in assessing white blood cells (WBC), red blood cells (RBC), and platelet disorders affects critically ill patients.
- b) Proof of knowledge and ability to assess and treat bleeding and coagulopathy in critically ill patients.
- c) Demonstrate knowledge and skills in diagnosing and treating patients with heparin induced thrombocytopenia (HITT).

9. Infectious Disease

- a) Demonstrate working knowledge of the workup of febrile patients in the surgical ICU.
- b) Demonstrate an understanding of the diagnosis, management, and differences between sepsis, systemic inflammatory response syndrome (SIRS), septic shock, and multi-organ failure.
- c) Demonstrate an understanding of strategies for avoiding nosocomial complications.
- d) Show an understanding of appropriate perioperative antibiotic prophylaxis strategies.
- e) An understanding of the prevention, diagnosis, and treatment of VAP, urinary tract infections, and central line infections.
- f) Demonstrate practical skills in the care and management of patients with necrotizing soft tissue infections.
- g) Understand invasive burn sepsis and infections in patients with burns.
- h) Show an understanding of the diagnosis and treatment of peritonitis.
- i) Show an understanding of the etiology, diagnosis, and management of

intra-abdominal sepsis.

- j) Show an understanding of the diagnosis and treatment of meningitis.
- k) Knowledge about the different indications for prophylactic, empirical, and therapeutic antibiotics, and the selection of drugs that are appropriate for a particular clinical situation.
- l) Demonstrate the ability to monitor antibiotic levels and make appropriate dose adjustments.
- m) Show knowledge to identify sources of non-bacterial infections in ICU patients such as fungi, viruses, and other abnormal pathogens.
- n) Understand the special considerations of patients who are immunocompromised by the disease process (HIV infection, diabetes, cirrhosis, etc.) and drugs (steroids, chemotherapy, rejection inhibitors, etc.).
- o) Show an understanding of how to control nosocomial infections and quarantine techniques.
- p) Understand different methods of protection for the care provider.
- q) Show an understanding of multidrug resistance.

10. Neurology

- a) Demonstrate appropriate, timely evaluation and management of patients with anoxic encephalopathy.
- b) Demonstrate appropriate, timely evaluation and management of patients with acute neurologic problems.
- c) Demonstrate the proper use and interpretation of brain and spinal cord imaging.
- d) Demonstrate understanding and proficiency in proper assessment and management algorithms for patients with spinal cord injury (SCI), including airway and hemodynamic management.
- e) Proper understanding and interpretation of information from increased



intracranial pressure (ICP), neurophysiology (including electroencephalogram (EEG) and evoked potentials), oxygenation of brain tissue, and monitoring of cerebral blood flow.

- f) Demonstrate appropriate management of extracerebral parameters to minimize the risk of secondary brain injury.
- g) Demonstrate knowledge and competency in the evaluation and nonoperative management of severe closed-head injuries.
- h) Demonstrate knowledge in the diagnosis and treatment of abnormalities in sodium homeostasis related to neurological diseases, including diabetes insipidus, syndrome of inappropriate anti-diuretic hormone secretion (SIADH), and cerebral salt wasting.
- i) Demonstrate efficiency in diagnosing and treating patients with stroke (ischemic or hemorrhagic).
- j) Proficiency in the diagnosis and management of patients with subarachnoid hemorrhage, including prevention of cerebrovascular spasm.
- k) Proof of ability to diagnose and treat patients with intracranial hypertension, including evaluation of data from intracranial pressure monitors or extra-ventricular drains.
- l) Show appropriate consultation with physiotherapy and rehabilitation specialists and rehabilitation facilities.
- m) Demonstrate the proper implementation of brain death authentication.
- n) Understand the basic principles of support for potential organ donors.

11. Nutrition/Metabolic Support:

- a) Proficiency in assessing and continuing to assess the nutritional needs of critically ill surgical patients.
- b) Demonstrate the ability of enteral and parenteral nutrition management.
- c) Familiarity with nasogastric and nasojejunal feeding tube placement

- d) Proficiency in percutaneous endoscopic gastrostomy, laparoscopic gastrostomy, and jejunostomy placement. Understand the role of micronutrients in nutritional support of critically ill patients
- e) Understand how to increase metabolic support and reduce catabolism.
- f) Demonstrate knowledge of the means for prevention and management of gastrointestinal bleeding.
- g) Demonstrate competency in managing electrolyte abnormalities.

12. Pharmacology

- a) Understand selection and adjustment of the appropriate drug dose are based on the principles of drug absorption, distribution, metabolism, and excretion.
- b) Demonstrate proper identification and management of potential drug interactions.
- c) Show an understanding of choosing cheaper medicines.

13. Rehabilitation:

- a) Understand the necessity of early and continuous intervention by rehabilitation therapists in the recovery of critically ill patients.
- b) Show that you understand the principles of joint positioning, splinting, and pressure equipment.
- c) Demonstrate understanding of the surgical procedures for contractures, resurfacings, and reconstructions.
- d) Demonstrate understanding of the criteria for inpatient rehabilitation, including intensive requirements for those with hypoxic brain injury due to inhalation injury.

14. Renal Failure

- a) Indicate that you are proficient in managing oliguria in critically ill patients.



- b) Understand appropriate management of electrolyte levels, intravascular volume status, and drug administration in patients with acute renal failure.
- c) Knowledge of the nutritional needs of patients with acute and chronic renal failure in the intensive care unit.
- d) Explain the relative and absolute indications for renal replacement therapy.
- e) Show that you understand the types of dialysis and the principles of solute transport.

15. Trauma

- a) Demonstrate competency in the assessment, triage, and resuscitation of injured patients according to the ATLS course.
- b) Demonstrate expertise in the management of patients with isolated burn injuries and concomitant blunt or penetrating trauma.
- c) Demonstrate competency in airway evaluation and control, including RSI and cricothyroidotomy.
- d) Demonstrate competency in spotting and handling thoracic injury, including easy and anxious pneumothorax, huge hemothorax, rib fractures and flail chest, pulmonary contusion, and top-notch vessel injury.
- e) Demonstrate familiarity with methods of needle chest decompression and tube thoracostomy.
- f) Demonstrate familiarity with suitable use of crystalloids, colloids, and blood products for resuscitation.
- g) Demonstrate competency in imposing a massive transfusion protocol.
- h) Demonstrate expertise on the benefits and drawbacks of endpoints of resuscitation, including essential symptoms and clinical findings, base deficit, lactate levels, and oxygen transport and intake variables.

- i) Demonstrate familiarity with different types of peripheral and central vascular access for massive transfusion and electrolyte replacement.
- j) Demonstrate competency and knowledge in assessment and management of intra-abdominal injury.
- k) Demonstrate competency in assessment and management of abdominal compartment syndrome.
- l) Demonstrate competency in the assessment and management of pelvic fractures, including associated soft tissue injuries.

Pediatric Critical Care Rotation

Duration: Two blocks (eight weeks) during the senior training year (F2).

Description: Interns need to demonstrate their ability to integrate medical knowledge and skills to provide patient-centric, safe, and quality care. Trainees need to develop skills in consulting and planning care for pediatric patients with critical illness based on clinical status, environment, cultural preferences, and available resources. Timely decision-making, with the ability to organize and participate in teamwork, is an essential skill that needs to be developed.

Trainees must be able to conduct comprehensive, interdisciplinary rounds to evaluate patients, summarize differential diagnoses, and develop problem lists and action plans. At the end of this rotation training, trainees need to develop their abilities in the following areas.

Medical Expert

- 1- Describe the natural course and clinical symptoms and signs of pediatric critical illness that occur in inpatients, intensive care units, and emergency care units.
- 2- Understand the pathophysiology of common diseases found in critically ill pediatric patients.
- 3- Demonstrate practical knowledge of critical care by actively participating



in the management of critically ill pediatric patients.

- 4- Have an interdisciplinary approach to understanding the integrated nature of the disease and managing critically ill pediatric patients.
- 5- Identify patients at risk, perform appropriate physical examinations, list problems, and begin treatment under the guidance of senior staff.
- 6- Prioritize and summarize approaches for assessing common symptoms in pediatric critical care centers.
- 7- Triage interventions that consider clinical urgency, potential for unexpected outcomes, and available alternatives.
- 8- Show confidence and ease in treating cardiac arrest and acute resuscitation in pediatric patients with trauma or acute illness.
- 9- Effectively understand the related medical history and perform appropriate physical examinations for critically ill pediatric patients.
- 10-Demonstrate the ability to perform common medical and surgical intensive care unit procedures in pediatric patients, such as central and arterial line insertion, oral tracheal intubation, puncture, thoracentesis, and lumbar puncture.
- 11-Appropriate selection and interpretation of laboratory, imaging, and pathological studies used to assess lung disease.
- 12-Develop a comprehensive treatment plan to assess the patient's response to treatment.
- 13-Effectively interpret the diagnostic tests used to evaluate pediatric critical care center patients, such as interpretation of arterial blood gases, chest X-rays, abdominal films, and computerized tomography (CT) scans.
- 14-Demonstrate the ability to critically evaluate and cite relevant literature.
- 15-Obtain and document patient informed consent and explain the risks, benefits, and reasons for the options discussed.

16-

17-Demonstrate skills for communication and counseling patients' family as regard diagnosis, planned diagnostic tests, and recommended treatments.

18-Effectively use validated tools to assess function and quality of life, and monitor and coordinate treatments.

19-Define patient and team member roles for follow-up testing and counseling sessions of treatment responses to ensure agreed aftercare during transfer to other facilities.

Communicator

1- Use a patient-centric approach to communicate effectively and show empathy and respect for contact with patient relatives.

2- Optimize the physical environment for patient comfort, dignity, privacy, and security.

3- Communicate well with patients' families and host services on their daily progress.

4- Keep in touch with the ICU team (nurse, resident, or caregiver) regarding patient care issues.

5- Involve patients with respect and non-judgment regarding religious and cultural values.

6- Demonstrate counseling skills and decision support to help patients' decision makers make informed decisions and provide informed consent.

7- Demonstrate effective listening and speaking skills with patients' families, and other members of the healthcare team.

8- Communicate the views and concerns of patients' families to the treating physician reliably and accurately.

9- Demonstrate documentation ability, including medical history, physical, progress, and discharge notes.



10-Accurately and appropriately notify patients' families of adverse events and procedural complications.

11-Accurately and quickly document clinical encounters in accordance with legal and regulatory requirements.

12-Share information with patients' families and other authorized people in a way that respects patient privacy and confidentiality.

13-Participate in end-of-life discussions with the intensive care team and family.

Collaborator

1- Participate in effective teamwork and respect the members of the team among other colleagues and professionals.

2- Demonstrate teamwork to avoid, identify and negotiate duplicate conflicts and shared responsibilities.

3- Recognize your own differences, misunderstandings, and restrictions regarding the views and opinions of others.

4- Discuss how the healthcare system affects the management of intensive care for inpatients.

5- Demonstrate effective collaboration with other healthcare providers.

6- Show awareness of the impact of diagnostic and treatment recommendations on the healthcare system.

7- Demonstrate effective and safe transfer within the facility or during deregistration to another setting or care level or transfer of care responsibilities.

Leader

1- Foster a teamwork culture that identifies, supports, and effectively deals with colleagues in need during patient care.

2- Efficiently perform the patient care tasks assigned during the rounds.

3- Recognize your personal limits and seek help as needed.

- 4- Recognize and respond professionally to the non-professional and unethical behavior of other employees.
- 5- Use resources effectively to balance patient care, training, and personal activities.
- 6- Wisely understand and allocate health resources.
- 7- Work efficiently and effectively in the medical system.
- 8- Use information technology properly for optimal patient care and personal scholarships.

Health Advocate

- 1- Identify the major health determinants that affect the patient.
- 2- Effectively contribute to improving the health of patients and communities.
- 3- Identify and address issues for which health promotion is appropriate.
- 4- Provide patient and family education on the importance of long-term health behavior and promotion of preventive health care (e.g., quitting, preventive health care, vaccination, exercise, diet).
- 5- Respect and strengthen patient autonomy.
- 6- Promote fair access to health care.
- 7- Apply the principles of quality improvement and quality assurance.
- 8- Assess the existence of global health advocacy groups and disease eradication initiatives (tuberculosis (TB), malaria, HIV, etc.) and the role of advocacy groups and funding agencies.

Scholar

- 1- Create, monitor, and revise your personal learning plan with meaningful feedback and ratings to facilitate intensive learning.
- 2- Set, rate, and prioritize individual learning goals.
- 3- Use assessment tools and practices in a particular learning context.



- 4- Recognize your own knowledge gaps in meeting clinical and other professionals.
- 5- Incorporate evidence into your decisions.
- 6- Promote a safe and secure learning environment for patients.
- 7- Properly use information technologies to manage information, support patient care decisions, and drive patient and clinician education.
- 8- Show a positive attitude towards teamwork and encourage collaborative learning.
- 9- Integration and application of knowledge from multiple research sources in the care of critically ill patients.
- 10-Analyze clinical experience and apply systematic methodologies for improvement.
- 11-Learn from mistakes and use them to improve care systems and process.

Professional

- 1- Demonstrate competence, quality improvement, and commitment to maintain and improve patient safety.
- 2- Recognize the importance of patient advantage, privacy, autonomy and Informed consent; respect and care for all people equally.
- 3- Respect the patient, the patient's family, employees, and colleagues.
- 4- Act professionally with regard to patient management by reporting all major clinical findings to treatment and referral providers, followed by clinical questions, laboratory tests, and other patient care issues to identify potential conflicts of interest. Model behavior.
- 5- Show honesty and openness when discussing treatment options and respect the social, religious, and cultural differences of the patient.
- 6- Respond quickly to calls, pages and messages.
- 7- Recognize and respond professionally to the non-professional and unethical behavior of other employees.

- 8- Promote a teamwork culture that recognizes, supports, and effectively deals with colleagues in need during patient care.
- 9- Indicate a commitment to the disclosure and impact of errors or adverse events. Show your responsibilities, including personal care, to serve others in the best possible manner.

Required Domains

By the end of the training in this rotation, the trainee should develop competency in the following domains.

B. Cardio Vascular Physiology, Pathology, and Therapy

1. Cardiovascular Physiology, Pathophysiology and Therapy:

- a) Demonstrate your knowledge and skills in targeted resuscitation, including optimizing tissue oxygenation in pediatric shock patients and understanding the major differences between hypovolemia, hemorrhagic shock, and neurogenic shock.
- b) Demonstrate knowledge and skills in interpreting and applying data from noninvasive and invasive diagnostic and monitoring techniques in pediatric patients.
- c) Demonstration of the ability to select and effectively apply various inotropic and vasoactive agents in pediatric patients with different types of shock (cardiogenic, neurogenic, septic, or mixed).
- d) Demonstrate the ability to select and use appropriate mechanical assist devices in pediatric patients with cardiogenic shock.
- e) Demonstrates the ability to interpret X-rays, such as chest X-rays, computed tomography (CT), and magnetic resonance imaging, and apply the data to the treatment of pediatric patients with cardiovascular disease.



- f) Demonstrate knowledge and skills in diagnosing and treating cardiac arrhythmias in pediatric patients
- g) Demonstrate knowledge and ability to apply extended pediatric advanced life support (PALS) guidelines properly.
- h) Demonstration of the ability to diagnose compartment syndrome of the limbs, abdomen, and trunk and the ability to perform escharotomy, fasciotomy, and decompression laparotomy in pediatric patients.
- i) Provide an understanding of the severity and proficiency of the management of pediatric patients with multiple organ failure.

2. Inhalation Injury/Respiratory Failure:

- a) Proficient in interpreting and using arterial blood gas data.
- b) Demonstrate the ability to interpret radiation data, such as chest X-rays and CT scans, and apply the data to clinical treatment plans for pediatric patients. an understanding of the characteristics and advanced methods of intubation of difficult airways in pediatric patients.
- c) Proof of competence in the diagnosis and treatment of inhalation injuries and carbon monoxide poisoning.
- d) Shows that you are proficient in diagnosing and managing acute exacerbations of COPD. Inhalation injury
- e) Demonstrate proficiency in airway management, such as intubation, tracheostomy, endotracheal tube, bronchoscopy, and pleural drainage.
- f) Demonstrate skills for withdrawal from mechanical ventilation, suction techniques, airway monitoring, and intrathoracic pressure monitoring.
- g) Demonstrate ability in diagnosing and treating pulmonary dysfunction in critically ill patients.

- h) Knowledge and efficiency in diagnosing and treating patients with lung infections, such as pneumonia, ventilated assisted pneumonia (VAP), empyema, lung abscess, and trachea-bronchitis, and in interpreting sputum culture.
- i) Indicate proficiency in the proper use of ventilators and other devices to assist in the gas exchange and interpretation of blood gas
- j) Demonstrate the ability of various weaning strategies of ventilated patients

3-Gastro-intestinal disorders

- a) Shows the knowledge and skills to distinguish between upper and lower GI bleeding sources.
- b) Demonstrate knowledge and skills of management of a patient with gastrointestinal bleeding.
- c) Ability to explain the cause and treatment of liver failure.
- d) Demonstrates understanding and proficiency in the diagnosis and treatment of ileus in critically ill pediatric patients.

4. Hematologic disorders

- a) Demonstrate knowledge and competency in the evaluation and assessment of WBCs, RBCs, and platelet disorders that affect critically ill pediatric patients.
- b) Demonstrating knowledge and competency in the evaluation and management of bleeding and clotting disorders in critically ill pediatric patients
- c) Evidence of knowledge and ability to treat critically ill patients with leukocyte, red blood cell, and platelet disorders



5. Infectious Disease

- a) Demonstrate practical skills in assessing febrile pediatric patients in the surgical intensive care unit.
- b) Diagnosis, management, and understanding of the differences between sepsis, SIRS, septic shock, and multiple organ failure.
- c) Demonstrate an understanding of strategies for avoiding nosocomial complications.
- d) Show an understanding of appropriate perioperative antibiotic prophylaxis strategies.
- e) An understanding of all aspects of prevention, diagnosis, and treatment of VAPs, central venous infections, and urinary tract infections.
- f) Demonstrate practical skills in the care and management of pediatric patients with necrotizing soft tissue infections.
- g) Demonstrate understanding of invasive sepsis from burns and infections in pediatric patients with burns.
- h) Show that you understand the differences between the prophylactic, empirical, and therapeutic antibiotic indications and the choice of drug that is appropriate for a particular clinical situation.
- i) Evidence of the ability to monitor antibiotic levels and make appropriate dose adjustments.
- j) Show knowledge to identify sources of non-bacterial infections in ICU patients such as fungi, viruses, and other abnormal pathogens.
- k) Show an understanding of medical-related infection control methods and quarantine techniques.
- l) Indicate protection for the care provider.
- m) Show an understanding of multi-resistant organisms and how to deal properly with their infection.

6. Nutrition/Metabolic Support

- a) Demonstrate your ability in assessing and continuing to assess the nutritional needs of critically ill pediatric surgical patients.
- b) Demonstrate the ability of enteral and parenteral nutrition management.
- c) Familiarity with the placement of nasal gastric and nasojejunal feeding tubes.
- d) Understand the role of micronutrients in nutritional support for critically ill pediatric patients.
- e) Understand how to promote metabolic support and reduce catabolism.
- f) Shows skills to deal with electrolyte abnormalities.

7. Pharmacology

- a) Understand selection of appropriate drugs and adjustment of drug doses are based on the principles of drug absorption, distribution, metabolism, and excretion.
- b) Demonstrate proper identification and management of potential drug interactions.
- c) Understand the choice of cheap medicine.

8. Psychosocial Support

- a) Show an understanding of the role of psychological stress in families and patients.
- b) Show an understanding of the role of social welfare, psychologists, psychiatrists, and mental leaders in the treatment of pediatric patients with burns.
- c) Show the ability to recognize and manage child abuse.
- d) Demonstrate proficiency in pain and anxiety management, including neuropathic pain, pruritus, and opioid withdrawal management.



9. Rehabilitation

- a) Demonstrate an understanding of the necessity of early and continuous intervention by physiotherapists, rehabilitation, and occupational therapists in the management of critically ill pediatric patients.
- b) Understand the basis of safe joint positioning, splinting, and immobilization
- c) Demonstrate understanding of the surgical and non-surgical approaches for joint contractures and reconstructions.
- d) Demonstrate understanding of the standard of rehabilitation care for inpatients with hypoxic brain insults due to inhalation injuries.

10. Renal Failure

- a) Evidence of proficiency in managing oliguria in critically ill pediatric patients.
- b) Evidence of appropriate electrolyte treatment, intravascular volume status, and drug administration in pediatric patients with acute renal failure.
- c) Evidence of knowledge regarding the nutritional needs of patients with acute and chronic renal failure in the pediatric intensive care unit.

11. Trauma

- a) Show that you are proficient in the initial assessment, triage, and resuscitation of injured patients, as described in the PALS course.
- b) Show that you understand the differences in the management of a pediatric patient with isolated burn injuries and those with associated blunt or penetrating trauma.
- c) Show skills and proficiency in the evaluation and management of the airway, such as RSI, cricothyroidotomy, and tracheostomy.

- d) Demonstrate familiarity with the appropriate use of crystalloids, colloids, and blood products for resuscitation of pediatric patients.
- e) Show understanding of the strengths and weaknesses of resuscitation endpoints, such as base deficit, lactate levels, and global variables of oxygen supply and consumption.
- f) Indicate that you are proficient in diagnosing intra-abdominal injuries.
- g) Show familiarity with the assessment and management of abdominal compartment syndrome.

12. Administration and Quality Improvement

- a) Show proficiency in implementing clinical protocols for the care of critically ill pediatric patients.
- b) Demonstrate the quality of the facility and its ability to implement improvement protocols for the care of critically ill pediatric patients.
- c) Demonstrate the ability to monitor patient outcomes and implement methods for reporting complications.
- d) Demonstrate knowledge of the differences between protocols and guidelines, and demonstrate competency in their development and implementation.
- e) Demonstrate understanding of the institutional, regional, and national disaster management protocols.
- f) Demonstrate understanding of the importance of multidisciplinary approach.
- g) Show that you are proficient in effective communication strategies and leadership skills such as dispute resolution and management strategies.
- h) Provide an understanding of the role of the intensive care unit in the medical system.
- i) Build effective relationships with counselors, surgeons, nurses, and other healthcare providers.



- j) Show sound ethical principles.
- k) Show an understanding of the need to develop and implement effective patient safety protocols.
- l) Show an understanding of the need to develop and implement quality improvement protocols.
- m) Show active participation in quality improvement activities.
- n) Show understanding of national and international quality improvement programs (CBAHI and JCIA).

ANESTHESIA Rotation

Duration: One block (four weeks) during the senior training year (F2)

Description: The trainee should demonstrate the ability to integrate medical knowledge and skills to provide patient-centered, safe, and high-quality care. The trainee should develop skills in providing advice and planning care for critically ill patients based on the patients' clinical status, surrounding environment, cultural preferences, and available resources. Timely decision-making with the ability to organize and participate in teamwork is an essential skill that must be developed.

The trainee should be able to conduct comprehensive and multidisciplinary rounds independently to assess patients, synthesize differential diagnoses, and create problem lists and action plans.

Adult critical care rotations should produce critical care medicine physicians with the following basic competencies:

1. Medical expert

- a) Describe the anatomy, physiology, and pathophysiology of diseases that affect the following systems:
 - Cardiovascular system

- Upper and airways
 - Central and peripheral nervous system
 - Liver
 - Kidney
 - Endocrine
 - Hematology
- b) The concepts of physics, biochemistry, and pharmacology related to anesthesia are explained, as described in the overall curriculum of the program.
- Gas supply system
 - Anesthesia machine
 - Electricity and Electricity Dangers
- c) Understand the relative strengths and weaknesses of different anesthetic approaches to induce and maintain anesthesia, with proper selection of anesthetics and analgesics to tailor each approach to the specific anesthesia goals of each individual.
- d) Appropriate selection and administration of a wide range of cardiovascular support and resuscitation agents during and after anesthesia. Consider the relative strengths and weaknesses of each approach, and tailor each approach to the specific anesthesia goal of the individual case.
- e) An independent implementation of specific techniques for the management of general, regional, and local anesthesia with sufficient selection spectra to achieve the anesthesia goals of all patients in the application areas defined above.
- f) Identify and manage perioperative complications.
- g) Identify risk factors for postoperative complications and modify anesthesia plans to minimize these complications.
- h) Understand the indications for discharge to the intensive care unit (ICU),



intermediate care unit, ward, and home environment.

- i) Contribution to predicting, identifying, eliminating of various perioperative disorders such as:
 - Postoperative nausea and vomiting
 - Pain
 - Ileus
 - Respiratory problems
- j) The principles and functions of all anesthesia machines include anesthesia machines, ventilators, safe anesthetic gas supplies, and monitoring devices.
- k) Identify and correct device malfunctions before and during anesthesia treatment.
- l) Efficient interpretation of the information obtained from the appropriate monitors, including invasive and non-invasive blood pressure monitors, 5-lead ECG, muscle relaxation monitoring, oxygen meters, expiratory terminal gas monitors, body temperature, urine volume, and invasive cardiac monitors.
- m) Identify and eliminate the causes of the monitoring device error.
- n) Appropriate selection of fluid and blood products in consideration of indications, contraindications.
- o) Identifying and managing complications associated with the administration of fluids and blood products throughout the perioperative period.
- p) Appropriately assess patients and risks, patient coexistence factors, including underlying medical conditions, surgical procedures, and other medical problems, anxiety, discomfort, culture, language, ethnicity, age, and sex.
- q) Appropriate monitoring of patients during anesthesia and timely management in response to changes in patient conditions or surgical

factors.

- r) Appropriate perioperative care of Pregnant patients for obstetric and non-obstetric procedures.
- s) Show efficiency in perioperative pain management strategy.
- t) Manage patients with different settings, for example:
 - Selective, emergency, and emergency / traumatic procedures.
 - A place away from the operating room
 - Unexpected emergencies (such as malignant hyperthermia and anaphylaxis)
- u) Independent implementation of all technical skills required to treat perioperative adult patients. example:
 - Routine and difficult airway management
 - Supervised anesthesia care (MAC) technology
 - Local and local anesthesia
 - General anesthesia techniques including induction, maintenance, and emergence techniques
 - Invasive monitoring of peripheral and central venous access
 - Resuscitation of critically ill adult patients (see ACLS and ATLS procedures and protocols)

2. Communicator

- a) Establish a therapeutic relationship with the patient or his relatives by:
 - Encouraging patients to participate in counseling, selective, urgent, and difficult decision-making, including patients with extreme age anger, confusion, and linguistic or ethnic cultural differences.
 - Listening to patients, answering questions, and reducing anxiety
- b) Gathering relevant information and identifying factors that contribute to perioperative management issues from patients, families, or healthcare professionals. for example:
 - Patient's medical and surgical condition



- Patient's expectations, beliefs, concerns (in addition to medical history)
 - Age, gender, ethnic cultural, spiritual, socio-economic background
- c) Discuss the patient's condition openly with the patient and important family members or representatives so that they can fully understand the impact of the proposed procedures, options, risks, and benefits. Provide sufficient information.
 - d) Obtain full consent for anesthesia treatment.
 - e) Understand how to convey bad news to patients and their families.

3. Collaborator

- a) Evidence of teamwork skills in the clinical setting.
- b) Understand care of adult patients should be coordinated with the operating room (OR), post-anesthesia units, and other members of the intensive care unit.
- c) Team members or leaders understand how to manage emergencies such as cardiac arrest, trauma, anaphylaxis, and malignant hyperthermia.
- d) Resolve conflicts or provide feedback as needed.
- e) Talk to your doctor and your health care professional about optimal perioperative care.
- f) Communicate effectively with other team members.

4. Leader

- a) Show knowledge of operating room management.
- b) Proof of knowledge of national guidelines on anesthesia practices and equipment.
- c) Record the anesthetics provided and the appropriate information for the consultation.
- d) Show quality assurance principles and conduct morbidity and mortality studies.

- e) Effective use of personal and external resources to balance patient care, training, practice, and personal activities.
- f) Manage assigned rooms/boards while maintaining the schedule and rescheduling in response to emergencies, delays, and additional incidents.
- g) Manage off-hours scheduling, prioritization, and adaptation to changes.
- h) If you are a Responsible Senior Fellow, assign the Fellow a different task list.
- i) Properly use limited health resources. example:
 - Time to evaluate patients, prepare operating room equipment, introduce, and hospitalize anesthesia, and change operating rooms
 - Participate in patient care and patient outcome assessments, including cost-effective drug and technology selection, equipment, and cost of anesthesia resources, including invasive monitoring options.
- j) Participate in the assessment of patient care and practice outcomes, including quality assurance (QA) methods. These include:
 - Keep a personal record of experience and results (experience protocol)
 - Participation in case discussion
- k) Explain how the anesthesia department is set up and operated.

5. Health advocate

- a) Provide instructions to health authorities regarding compliance with national clinical practice guidelines and equipment standards for anesthesia.
- b) Anesthesiologists recognize the opportunity to advocate for resources for pain management, new medical technologies, and new medical practices.
- c) Identify personal and systemic issues that affect anesthesia care and safety in adult patients.



- d) Communicate identified concerns and risks to patients, other healthcare professionals, and managers as needed.
- e) Timely intervention and management of any conflict regarding quality of care and safety for the benefit of the patient and the entire system.
- f) Identify and address risks to healthcare providers, including but not limited to:
 - Substance abuse by anesthesiologists and other healthcare providers
 - Dangers in the work environment
- g) Implement standards and guidelines related to anesthesia practice and equipment.

6. Scholar

- a) Develop and maintain a personal learning strategy for ongoing accreditation.
- b) Find and evaluate literature to support clinical care decisions and practice the application of new evidence-based knowledge.
- c) Contribute to the appropriate application, dissemination, and development of new knowledge.
- d) Principles and methods of adult education for medical students, internships, and other medical professionals

7. Professional

- a) Understand how to provide the highest quality patient care with integrity and compassion.
- b) Adhere to the ethical and legal aspects of patient care.
- c) Maintain patient confidentiality.
- d) Show appropriate interpersonal and professional behavior.
- e) Recognize your personal limitations through appropriate counseling (with your boss, other doctors, and other medical professionals) and show appropriate respect to the person you are talking to.

- f) Demonstrate the ability to recognize, discuss, and resolve disagreements in patient care, professional relationships, and values.
- g) Accept constructive feedback and criticism. Therefore, implement the appropriate advice.
- h) Continuously review personal and professional skills, and identify patterns of skills and knowledge for continuous development through education.
- i) Identify physical and mental health problems, including burn out, stress, depression, and how to deal with these problems of yourself and others.

Burn Critical Care Operative and Procedural Skills

Trainees should acquire operational and procedural skills and understand the indications, contraindications, complications, techniques, and pitfalls of these interventions through workshops, simulation courses, and control rooms.

1. Emergency esophagostomy in circumferential burns (upper limbs, lower limbs, abdomen-chest-neck-genitalia)
2. Emergency fasciotomies (upper extremities and lower extremities)
3. Early excision of burns
 - Tangential excision
 - Fascial excision
4. Debridement of infected burn wounds
5. Skin grafts:
 - Split thickness skin graft (sheet-meshed)
 - Full thickness skin graft
6. Use of artificial dermal matrix and skin substitutes
7. Skin flaps (local, regional, distant, free flap)
8. Tissue expansion surgery
9. Release of post-burn contractures, including the neck, axilla, knee, elbow,



hand, and foot

10. Open airway maintenance in non-intubated, unconscious, paralyzed patients
11. Intubation (oral and nasotracheal)
12. Cricothyrotomy, transtracheal catheterization, and tracheostomy
13. Ventilation of bag and mask
14. Indications, applications, techniques, criteria, and physiological effects of positive end-expiratory pressure, intermittent positive pressure breathing, intermittent mandatory ventilation, continuous positive airway pressure, pressure support ventilation, and noninvasive ventilation.
15. Suction techniques
16. Chest physiotherapy and incentive spirometry
17. Fiber-optic laryngo-tracheal bronchoscopy
18. Weaning techniques
19. Management of pneumothorax (needle and chest tube insertion of drainage systems)
20. Monitoring of airway pressures
21. Operation of mechanical ventilators
22. Application of appropriate oxygen therapy
23. Arterial puncture and blood sampling
24. Insertion of monitoring lines
25. Central venous
26. Arterial line
27. Pericardiocentesis
28. Infusion of epinephrine, dopamine, norepinephrine, nitroglycerin, dobutamine, isoproterenol, nitroprusside, and other vasoactive drugs
29. Use of infusion pumps for vasoactive drugs

30. Cardioversion

31. Management of peritoneal dialysis

32. Insertion of hemodialysis catheters

Burn Critical Care Operative and Procedural Skills

Name and Procedure	Minimum number required (Procedures done Independently)	
	F1	F2
1. Emergency escharotomy in circumferential burns (upper limbs- lower limbs- abdomen-chest-neck- genitalia)	15	10
2. Emergency fasciotomies (upper extremities and lower extremities)	8	6
3. Early excision of burns ○ Tangential excision ○ Fascial excision	22	20
4. Debridement of the infected burn wounds	16	10
5. Skin grafts: ○ Split thickness skin graft (sheet-meshed) ○ Full thickness skin graft	20	30
6. Use of artificial dermal matrix and skin substitutes	10	20
7. Skin flaps (local, regional, distant, free flap)	8	12
8. Tissue expansion surgery	4	6
9. Release of post-burn contracture (neck-axilla-knee- elbow-hand and foot)	10	25
10. Open airway maintenance in non-intubated, unconscious, paralyzed patients	10	15
11. Intubation (oral and nasotracheal)	10	15



Name and Procedure	Minimum number required (Procedures done Independently)	
	F1	F2
12. Cricothyrotomy, transtracheal catheterization and tracheostomy.	1	1
13. Ventilation of bag and mask	5	5
14. Indications, applications, techniques, criteria, and physiological effects of positive end-expiratory pressure, intermittent positive pressure breathing, intermittent mandatory ventilation, continuous positive airway pressure, pressure support ventilation, and (optionally) noninvasive ventilation	4	6
15. Suction techniques	-	-
16. Chest physiotherapy and incentive spirometry (optional)	-	-
17. Fiber-optic laryngotracheal bronchoscopy	2	2
18. Weaning techniques	10	15
19. Management of pneumothorax (needle and chest tube insertion of drainage systems)	2	2
20. Monitoring of airway pressures	5	5
21. Operation of mechanical ventilators	10	15
22. Application of appropriate oxygen therapy	10	15
23. Arterial puncture and blood sampling	20	15
24. Insertion of monitoring lines	4	5
25. Central venous	10	15
26. Arterial line	8	10
27. Pericardiocentesis	1	1

Name and Procedure	Minimum number required (Procedures done Independently)	
	F1	F2
28. Infusion of epinephrine, dopamine, norepinephrine, nitroglycerine, dobutamine, isoproterenol, nitroprusside, and other vasoactive drugs.	10	15
29. Use of infusion pumps for vasoactive drugs	10	15
30. Cardioversion	2	3
31. Management of peritoneal dialysis	1	1
32. Insertion of hemodialysis catheters	2	3

Method of documentation

Trainees should document all clinical procedures in an electronic logbook or regular logbook throughout the program. Activities should be dated and categorized according to the training period/rotation and whether the trainee performed them as an assistant or participant. All activities entered in the logbook must be signed by the program administrator when they are considered complete. (APPENDICES: 1-2-3-4-5-6-7-8-9-10-11-12-13)

Selective rotations

Selective rotation aims to explore career opportunities, gain medical experiences beyond the core curriculum, and provide flexibility and opportunities to deepen specific areas. Knowledge, skills, and attitudes develop further in the areas of voluntary choice throughout the curriculum. Apprentices have the right to one month of selective experience. Trainees are free to identify and select specific selective rotations that match their individual educational goals, subject to the approval of the Program Director and Fellowship Program Committee. For each choice, trainees should appoint a supervisor responsible for monitoring their experience and assessing their



performance. Fellowship program directors and supervisors are responsible for ensuring a clear mutual understanding of learning activities for selective purposes. Requests for selective rotation must be submitted to the program director at least three months before the start of selective rotation. Using this form, trainees are expected to provide the following: (1) A summary of selective experiences. (2) Explanation of goals and objectives of selective experience. (3) The schedule of activities and responsibilities they undertake during the selective experience. This document must be signed by the Program Director, Elective Supervisor, and trainee. The following table lists some suitable choices.

Selective Rotations

Table:

Selective Rotation	Objectives
Clinical Nutrition	<ul style="list-style-type: none"> a. Show proficiency in assessing and continuing to assess the nutritional needs of critically ill surgical patients. b. Demonstrate the ability of enteral and parenteral nutrition management. c. Indicate familiarity with the placement of the nasogastric and nasojejunal feeding tubes. d. Show familiarity with the placement of percutaneous endoscopic gastrostomy, laparotomy, and laparoscopic gastrostomy, and jejunostomy. e. Show an understanding of the role of micronutrients in the nutritional support of critically ill patients. f. Understand how to increase metabolic support and reduce catabolism. g. Show knowledge about how to prevent and treat gastrointestinal bleeding. h. Demonstrate the ability to deal with electrolyte imbalances

Table:

Selective Rotation	Objectives
Rehabilitation	<ul style="list-style-type: none"> a. By receiving burn rehabilitation therapy, we show an understanding of the need for early and continuous intervention in the recovery of critically ill patients. b. Show that you understand the principles of joint positioning, splinting and pressure equipment. c. Show an understanding of contractures, surface reconstruction, and surgical procedures associated with reconstruction. d. Demonstrate an understanding of inpatient rehabilitation criteria, including intensive requirements for people with hypoxic brain injury due to inhalation injury.

Table:

Selective Rotation	Objectives
Research Methodology	<ul style="list-style-type: none"> a. Understand the principles and process for development and implementation of clinical trials. b. Understand common statistical principles and tests and their usefulness. c. Understand the importance of good record keeping in research. d. Understand the ethical considerations in research involving humans and animal subjects. e. Demonstrate knowledge of how to prepare protocols involved in hypothesis and observational research. f. Understand the process of organizing a laboratory research project. g. Understand the principles of evidence-based medicine techniques. h. Prepare and refine a workable research protocol, including a proposal for ethics committee review. i. Prepare, organize, and analyze a data base. j. Prepare a draft manuscript and abstract.



Table:

Selective Rotation	Objectives
Infectious Disease	<ul style="list-style-type: none"> a. Demonstrate a running expertise of the workup of the febrile affected person in the surgical ICU. b. Diagnosis, treatment, and understanding of the differences between sepsis, SIRS, septic shock, and multiple organ failure. c. Shows knowledge of strategies for avoiding nosocomial complications. d. Demonstrate an understanding of appropriate perioperative antibiotic prophylaxis strategies. e. Shows an understanding of the prevention, diagnosis, and treatment of VAP, central venous infections, and urinary tract infections. f. Demonstrate practical skills in the care and management of patients with necrotic soft tissue infections. g. Shows an understanding of invasive burn sepsis and infections that occur in patients with burns. h. Shows an understanding of the diagnosis and treatment of peritonitis. i. Provides an understanding of the etiology, diagnosis, and management of intra-abdominal sepsis. j. Shows an understanding of the diagnosis and treatment of meningitis. k. Shows that you understand the differences between prophylactic, empirical, and therapeutic antibiotic indications, and the choice of drug that is appropriate for a particular clinical situation. l. Demonstrate the ability to monitor antibiotic levels and make appropriate dose adjustments. m. Demonstrate knowledge to identify sources of non-bacterial infections (such as fungi, viruses, and other abnormal pathogens) in patients in the intensive care unit. n. Understands the special considerations of patients who are immunocompromised by the disease process (HIV infection, diabetes, cirrhosis, etc.) and medications (steroids, chemotherapy, rejection inhibitors, etc.).

Selective Rotation	Objectives
	<ul style="list-style-type: none">o. Shows an understanding of medical-related infection control methods and quarantine techniques.p. Indicates the protection of the healthcare provider.q. Shows understanding of multidrug resistance infection.



9-CONTINUUM OF LEARNING

This includes learning to be conducted at each major stage of progress within the subject. Trainees remember the facts of continuing professional development (CPD). Apprentices need to keep in mind the need for CPD for healthcare providers to meet the demands of their important professions. The following table shows the gradual development of roles at the junior, senior, and consultant levels:

Specialty General Practice	F1 (Junior Level)	F2 (Senior Level)	Consultant sub specialist
Subspecialty Non-practicing	Dependent/supervised practice	Dependent/supervised practice	Independent practice/provide Supervision
Knowledge of basic health sciences and core fields	Acquisition of basic knowledge related to core clinical problems in the subject area	Application of knowledge to provide appropriate clinical care related to core clinical problems in the subject area	Advanced in core clinical practice Acquisition of the latest knowledge Subject areas and their management issues
Internship to the practice of discipline	Applying clinical skills such as physical examinations and practical procedures to core problems and procedures in the discipline	Analyzing and interpreting the results of clinical skills to create an appropriate differential diagnosis and treatment plan for patients	Challenging and inconsistent A diagnostic and management plan that compares and evaluates findings and the development of advanced differentials.

10- TEACHING METHODS:

The educational process of the Burn Critical Care Fellowship training program was primarily based on the principles of adult education theory. Trainees must understand the importance of learning and play an active role in the content and process of their learning. The training program implemented the concept of adult education for each activity characteristic. Here, the trainee is responsible for his/her learning needs. The training period included three formal educational activities.

- Program-specific learning activities.
- Universal Topic
- General Learning Opportunities

1- Program Specific Learning Activities.

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

A) Program academic half-day:

A minimum of 2-4 hours of formal training hours (commonly referred to as academic half-day) should be booked each week. Formal class hours are assigned to tutors, timeframes, and pre-planned activities at the venue. Formal class hours do not include bedside or clinic classes. Academic Half



Day consists of core subjects determined and approved by the subject's academic council, tailored to the subject's unique abilities and pedagogy.

The Burn Critical Care core curriculum is divided into eight main modules, each of which is divided into half-day scheduled academic topics (see Academic Half-Day Activities). The modules are:

Training year	Modules	
	Number	Name
F1	Module 1	Skin structure and function / Pathophysiology of burns.
	Module 2	Burn shock resuscitation / smoke inhalation / intensive care.
	Module 3	Anesthesia / pain and pruritus / burn wound dressing and skin substitutes.
	Module 4	Acute treatment of burn wounds / Acute surgery
F2	Module 5	The basics of burn reconstruction
	Module 6	Burn rehabilitation / multidisciplinary team approach.
	Module 7	Medicolegal practice / psychology / psychiatry
	Module 8	Research methods and ethics in incineration.

The core subject ensured that the participants' important clinical issues were well-taught. Lectures were recommended in an interactive case-based discussion format. The learning objectives for each core topic must be clearly defined, and it is advisable to use pre-learning materials. If applicable, core subjects should include workshops, team-based learning, and simulations to develop skills in the core process. Local supervisors must work with academic and training services, program directors, and chief fellows to ensure the planning and implementation of academic activities specified in the curriculum. Fellows need to be actively involved in the development and distribution of topics under the supervision of the faculty, and participation

can take the form of distribution, content development, and research. Supervisor trainers must ensure that each topic is divided into three categories of learning areas: knowledge, skills, and attitudes.

The recommended half-day each year is 40 sessions per grade of training, reserved for other educational methods such as journal clubs and clinical practice education. Program directors and chief fellows should work with education and local supervisors to ensure that academic activities are planned and carried out according to the curriculum through the Assistant Board of Education. The goal is to efficiently use available resources and optimize the exchange of expertise.

This course should be presented in a 4-hour session each week. Scholarship holders should be relieved of their obligations regarding rotation or block courses during the research program

Objectives

- 1) Allow trainees to acquire current knowledge and exchange information and experiences with colleagues and trainers.
- 2) Inclusion of burn intensive care approach in clinical problem management.
- 3) Acquire important skills to burn critical care fellows (e.g. problem solving, teamwork, counseling).
- 4) Practice negotiation and presentation skills.
- 5) Relieve fellow stress and allow to meet colleagues at different levels.

Guidelines for academic half day

- 1) Main topics (60% -80% of sessions): Presentations by trainees and small groups and workshops moderated by trainers. These presentations should follow a Burn Critical Care problem-solving approach, and the information should be provided as evidence-based as possible.
- 2) To get the maximum benefit from these sessions, trainers must actively contribute to the sessions.



- 3) Open activities: HDRC sessions are offered once or twice a year to enable free activities with which both trainees and trainers can interact. This allowed stakeholders to reduce their stress levels.
- 4) Annual Optional Events: These sessions aim to improve the specific skills of scholarship holders in a comfortable manner. The choice of priorities and focused skills is based on the needs of the trainee.

Regulations

The Academic Half-Day Program is an integral part of the fellowship program. It is designed to complement the clinical experience gained by fellows during clinical rotation. Considerable efforts must be made to make these sessions interesting and relevant.

- 1) Each session has a fellow and trainer responsible for conducting and organizing the entire course. Scholarship students must work under the supervision of a trainer.
- 2) The entire group needs to be actively involved in preparation and activities.
- 3) Details of each HDRC must be sent to all fellows at least one week before the presentation.
- 4) The trainer must supervise each participant in preparation for the presentation (HDRC plans include the names of supervisors and fellows on the corresponding dates).
- 5) Trainees should contact their managers at least to 2-3 weeks before the presentation to discuss schedules, presentations, learning methods, and discussion topics. (If the trainee has difficulty contacting his/her boss, he/she must contact the program secretary).
- 6) The supervisor trainer must attend a presentation with the trainee to facilitate the entire session.
- 7) Educational activities need to incorporate a variety of teaching methods and strategies, but passive learning methods, such as lectures, should be avoided. These methods include, but are not limited to, problem-solving,

case discussions, interactive mini-presentations, group discussions, role-playing games, tutorials, workshops, and challenges.

- 8) All educational events should highlight important topics related to ethics, evidence-based medicine, practice management, disease prevention, health promotion, proper communication skills, and professionalism.

Trainees' Attendance

Please refer to the SCFHS website for policies and regulations.

Academic half-day table linked to CanMEDS— Burn Critical Care

The Academic Half-Day Program is an integral part of the fellowship program. It is designed to complement the clinical experience gained by fellows during clinical rotation. Considerable efforts must be made to make these sessions interesting and relevant. 1) Each session had a fellow trainer responsible for conducting and organizing the entire course. Fellows must work under the supervision of trainers. 2) The entire group must be actively involved in preparation and activities. 3) Details of each HDRC must be sent to all fellows at least one week before the presentation. Academic Half-Day is a supervised educational activity that the program must carry out weekly. Two trainers need to supervise these activities, each of which should last for at least three hours. A formal evaluation of the tutor should be carried out, and this feedback should be used to change the content and tutor of learning and educational activities.



ACTIVITY	OBJECTIVES	CanMEDS COMPETENCIES
Communication skills	<ul style="list-style-type: none"> • Develop patient-centric therapeutic communication through shared decision-making and effective dynamic interactions with patients, families, other professionals, and other important people. • Counseling and education of patients and their parents on the role of early detection and prevention. • Show that you have mastered basic interview skills and are proficient in certain advanced interview skills. • In all situations, show professional behavior, including respect for patients, colleagues, teachers, and others. • Apply ethical knowledge to clinical care. • Explain the process of informed decision making in healthcare. • Describe legal issues related to DNR orders. • Explain legal issues related to refusal of treatment of the patient. 	Leader, Medical expert, Professional, Scholar
MCQs/Slides	<ul style="list-style-type: none"> • Train and teach fellows regarding the way in which this mode of assessment should be conducted. • Identify weaknesses and strengths in knowledge and practice. • Acquire further confidence in attending such examinations. 	Medical expert, Scholar

ACTIVITY	OBJECTIVES	CanMEDS COMPETENCIES
Data interpretation	<ul style="list-style-type: none"> • Describes the various testing tools used in critical care for burns. • Improve the interpretation of various test data. • Improve the use of investigation tools in both general and unusual situations. • Understand the limitations of various research tools. 	Medical expert, Scholar
Research methodology and preparation	<ul style="list-style-type: none"> • Acquire the necessary knowledge of research design, including study design, abstract writing skills, and presentation skills. • Gain competence in performing literature reviews, data synthesis, data analysis, and interpretation. • Develop research proposals for various topics with the help of faculty mentors. • Conduct research on a topic broadly related to burn critical care. • Communicate research findings through oral presentations, poster presentations, abstract preparation, or article publication. 	Professional, Leader, Scholar
Approaches to common conditions	<ul style="list-style-type: none"> • Shows diagnostic and therapeutic skills. • Access relevant information and apply it to clinical practice. • Practice modern, evidence-based, cost-effective medical care. • Avoid unnecessary or harmful investigations or controls. 	Medical expert, Scholar, Health advocate
Clinical teaching	<ul style="list-style-type: none"> • Practice medical history taking and show that you are proficient in certain advanced interviewing skills. 	Medical expert, Scholar, Communicator, Professional



ACTIVITY	OBJECTIVES	CanMEDS COMPETENCIES
	<ul style="list-style-type: none"> Demonstrate skills on physical examinations and acquire the ability to perform and interpret targeted examinations. In all situations, show professional behavior, including respect for patients, colleagues, teachers, and others. Prepare fellows for clinical trials. 	S

Academic Half-Day Activities

Academic week	Section	Date	Time	Sessions	presenters
1	Fundamentals in burn	Oct 5	13:00-14:00	Welcome session	Program director
			14:00-15:00	Topic 1: Skin structure and function.	A
			15:00-16:00	Topic 2: Multidisciplinary approach to burn care / history of burn treatment.	B
2	Fundamentals in burn	Oct 12	13:00-14:00	Topic 3: Epidemiological, demographic and outcome characteristics of burn injuries. Epidemiological, demographic and outcome characteristics of burns.	C
			14:00-15:00	Topic 4: Prevention of burn injuries.	D
			15:00-16:00	Topic 5: Burn management in disasters and crises.	E
3	Fundamentals in burn	Oct 19	13:00-14:00	Topic 6: Prehospital management, transportation of burn care.	F

Academic week	Section	Date	Time	Sessions	presenters
			14:00-15:00	Case base study	B
			15:00-16:00	Topic 8: Pathophysiology of burn shock and burn edema.	C
4	Fundamentals in burn	Oct 26	13:00-14:00	Journal club*	K
			14:00-15:00	Case base study	B
			15:00-16:00	Topic 10: Systemic inflammatory response syndrome in major burns.	A

B) Practice-based learning:

Training exposures during bedside, OPD, OR, and other work-related activities that include courses and workshops (e.g., simulations and standardized patient bedside teaching) represent excellent targets for learning. Trainees are expected to build their capacity through self-directed learning.

On the other hand, practice-based learning allows educators to supervise trainees to become competent in the required program practical skills that ensure fulfilling the knowledge, psychomotor, and/or attitude learning domains. All trainees had to maintain a logbook with documented procedures that had been observed, supervised, and performed independently. We recommend that you establish a minimum number of steps that you need to perform before you complete your training, and a minimum number that you need to maintain your abilities after certification.

This section will allow the program to describe the required courses or workshops in detail, including the objectives of the course or 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 formative assessment tools that are relevant to them (e.g., DOPS, Mini-CEX, and Logbook).

Practice-based learning

ACTIVITY	OBJECTIVES	CanMEDS COMPETENCIES
Clinic-based learning (CBL)	<ul style="list-style-type: none"> • Obtain focused histories and perform physical examinations under the supervision of the consultant/senior fellow. • Present clinical findings to senior fellows / supervisor in a concise manner • Discuss the differential diagnosis and treatment plan with your senior fellow/ trainer. • Write down the patient's assessment and differential diagnosis and treatment plan. • Develop communication skills by observing the attendance of advisors / senior fellows. 	Medical expert, Communicator, Health advocate.
Daily-round-based learning (during specialty training)	<ul style="list-style-type: none"> • Present the team with a focused medical history and physical examination results. • Document history and physical findings in a recognized format, including a fully written database, problem list, and focused SOAP notes. • Talk to others to develop a patient management plan. • Conduct complete, concise, informative follow-ups on previous patients. 	Medical expert, Communicator, Health advocate
On-call duty-based learning	<ul style="list-style-type: none"> • Get a comprehensive medical history, complete physical examinations on admission, clearly record patient assessments and differential diagnoses of medical problems, and begin management planning. • Discuss management plans, including testing and treatment plans, with older people. • Communicate plans to nurses assigned to patients. 	Medical expert, Scholar, Communicator, Professional

ACTIVITY	OBJECTIVES	CanMEDS COMPETENCIES
	<ul style="list-style-type: none"> • Perform the basic steps required for diagnosis and management. • Attend medical hours both inside and outside the department, including emergency consultations, and visit the outpatient clinic once or twice a week. 	
Self-directed learning	<p>Maintain a personal portfolio (self-assessment, reflection learning, self-development planning).</p> <ul style="list-style-type: none"> • Identify good starting points for your learning tasks and get support from colleagues and mentors as needed. • Acquire the ability to recognize your learning needs and goals. • Collect examples of acceptable learning outcomes. • Promote critical thinking. • Find the right learning resource. • Develop confidence in learning. • Get in the habit of reading journals. 	Medical expert, Scholar

Self-directed learning (SDL)

Self-directed learning (SDL) refers to a learning experience planned and organized by colleagues. SDL is used to advance learning in a particular topic or area, or to achieve personal learning goals.

Fellows should be encouraged to:

- 1) Be engaged in various SDL activities.
- 2) Perform higher level learning-related activities: from knowledge to application and effectiveness.
- 3) Collaborate with others or work in teams to achieve common goals.

Rules

- 1) Trainees must document their SDL.

- 2) The mentor or supervisor reviews the SDL activity during the supervisory meeting and assesses the performance levels and scores of the fellows on the portfolio evaluation sheet (Appendix 10).

Examples of SDL activities

- 1) Read a journal article.
- 2) Search the Internet for answers to specific clinical questions.
- 3) Participation in accredited meetings / courses.
- 4) Case presentation.
- 5) Small group activities.
- 6) Practical evidence in real life.
- 7) Journal club.
- 8) Teach other colleagues and medical students.
- 9) Quality improvement / patient safety activities.
- 10) Participation in research or departmental projects.
- 11) Perform a bibliographic search on a specific topic.

Journal articles' reading:

Trainees selected and read interesting articles on their own and discussed them with clinical supervisors during supervisor interviews.

During the discussion, the participants were questioned as follows.

- Write a brief description of the article.
- Identify the most important aspects of this study.
- Define questions for the survey.
- Discuss the methodology used by the authors.
- Explain the results.
- Describe the main ideas of this study
- Summarize the conclusions.

Search the internet for answers to specific clinical questions

Based on the trainee's clinical agenda, he/she will be instructed to identify answers to clinical questions regarding the observed cases. Trainees are required to print out the results of the survey and bring them to the supervisory meeting.

Participation in Accreditation Meetings

Trainees were assigned seven training days per academic year to attend non-mandatory courses related to their subjects. This course can be considered an SDL. Trainees are required to submit a copy of their attendance certificates.

Case presentations

Presenting clinical cases within a department or group activities can be considered SDL. The presentation was evaluated by a supervisor.

Small-group activities

Trainees from the same center (same or different scholarship levels) can participate in group activities supervised by clinical trainers. All participants in the session should be considered when performing the SDL activities.

Practical Evidence Applied in Real Life (PEARLS)

Trainees can select one of the aspects of PEARLS and discuss it in a supervisory discussion or present it as part of a departmental activity (e.g., treatment is effective). I will now summarize whether it is a target or not).

Practice guidelines

Trainees can choose one of the practical guides and discuss them in a supervisory interview, or present them as part of a departmental activity.



Journal Club

Trainees must, with the help of a clinical supervisor, select articles and present them in the activities of the journal club. All trainees were required to attend the activity.

Teaching other colleague and medical students

These are clinical education, participation in junior fellow educational activities, or undergraduate education (demonstrators).

Quality improvement/patient-safety activities (mini project)

Trainees can participate in the Quality/Patient Safety Mini-Project to learn additional practical principles.

Participation in research.

Results must be presented before each rotation is complete.

Performing a literature Search on a Specific Topic

A clinical trainer can assign a trainee to a specific topic and ask them to conduct a literature search.

Designing an e-learning object: Patient education/educational activities (podcasts, tapes, videotapes, etc.)

Trainees can design e-learning objects related to burns (e.g., health education or training). Raw/student lecture video tape, audio tape, or podcasts). Materials should be evaluated in terms of topic, content, design, and presentation.

C) Morning report:

The morning report was a case-based classroom. It is common in many training and scholarship programs with different purposes and emphasis. The goal of the morning report is to teach efficient takeover strategies and case-presentation skills, facilitate discussions on how to

manage interesting cases, and improve problem-solving and interdisciplinary team skills.

2-UNIVERSAL TOPICS

Module 1: Introduction

1. Safe drug prescribing
2. Hospital-acquired infections
3. Sepsis; SIRS; DIVC
4. Antibiotic stewardship
5. Blood transfusion

Module 4: Medical and Surgical Emergencies.

15. Management of acute chest pain
16. Management of acute breathlessness
17. Management of altered sensorium
18. Management of hypotension and hypertension
19. Management of upper GI bleeding
20. Management of lower GI bleeding

Module 5: Acute Care

21. Pre-operative assessment
22. Post-operative care
23. Acute pain management
24. Chronic pain management
25. Management of fluid in the hospitalized patient
26. Management of electrolyte imbalances



Module 6: Frail Elderly

27. Assessment of frail elderly individuals
28. Mini-mental state examination
29. Prescribing drugs in elderly individuals
30. Care of elderly individuals

Module 7: Ethics and Health

31. Occupational hazards of HCWs
32. Evidence based approach to smoking cessation
33. Patient advocacy
34. Ethical issues: transplantation/organ harvesting; withdrawal of care
35. Ethical issues: treatment refusal; patient autonomy
36. Role of doctors in death and dying

3-General learning opportunities

Formal training periods should be complemented by problem-based learning (PBL).

- Journal Club (twice monthly)
- Grand rounds (once weekly)
- Involvement in quality improvement committees and meeting (according to the scheduled committee meeting)
- Continuous professional activities (CPD) relevant to specialty (conferences and workshops)
- Morbidity and mortality (once monthly)

Educational activities

Teaching and learning activities linked to CanMEDS Burn Surgery and Critical Care

Regular meetings

ACTIVITY	OBJECTIVES	CanMEDS COMPETENCIES
Morning report and case presentation	<ul style="list-style-type: none"> To monitor patient care and management decisions and their outcomes. Develop competence in presenting cases in a concise and an informative manner. the ability to present cases concisely and informatively Develop the ability to make the right differential diagnosis and the right treatment plan. Acquire appropriate presentation skills. 	Leader, Medical expert, Professional scholar
Morbidity and mortality report	<ul style="list-style-type: none"> Identify areas that can be improved from a clinical care perspective. Avoid future medical malpractices by learning from previous incidents. Identify system problems, such as old policies and procedures for identifying patients. • Understand the confidentiality of colleagues involved in the cases discussed. 	Professional, Leader, Medical expert
Grand rounds	<ul style="list-style-type: none"> Expand your medical knowledge and skills. Expand your medical knowledge and skills. Find out about the latest advances in medical research. Identify and discuss controversial issues in the medical field. 	Medical expert, Professional
Journal clubs, critical appraisal	<ul style="list-style-type: none"> Promote professional development. To keep current medical research up to date. Disseminate information and discuss best practices. Learn and practice efficient search strategies and important assessment skills. Implementation and application of acquired knowledge and skills in clinical practice. 	Medical expert, Scholar, Health advocate



11-ASSESSMENT AND EVALUATION

1-Purpose of evaluation

- Assessment plays an important role in the success of training. The evaluation guides trainees and trainers in achieving defined criteria, learning outcomes, and abilities. However, assessments provide learners and facilities with feedback on curriculum development, teaching methods, and quality of the learning environment. Reliable and effective assessments are a great tool for assessing curriculum direction among goals, learning methods, and assessment methods. Finally, the assessment ensures that health professionals and the general public were safe and the former, practically competent.

The evaluation of the entire program was carried out using the framework of canned medical professionals in accordance with the Commission's training and inspection rules and regulations.

Assessment can serve the following purposes:

- Support and improve learning experience.
- Develop professional growth.
- Monitor program.
- Evaluate the quality of the training program.
- Judge competency and allow for certification.
- Assessment should be continuous in nature.
- This assessment should be strongly related to the curriculum and content of the fellowship program.

For organizational principles, assessments are further divided into two main categories: formative and summative.

2-Formative assessment

Formative assessment (and continuous assessment) is a component of assessment distributed throughout the school year, with the aim of providing effective feedback to trainees. Input from the overall formative assessment tool was used at the end of the first year to determine the promotion of each individual trainee in the second year of training. Formative assessments are defined and updated on the basis of scientific (council/committee) recommendations.

Formative assessment has the following characteristics.:

- a. Multi-source.
- b. Comprehensive covers all areas of learning (knowledge, skills, and attitude).
- c. Related: focus on workplace-based observations.

Corresponding to the development level of the apprentice



Learning Domain	Formative Assessment Tools	Important details (e.g., frequency specifications related to the tool)
Knowledge	<ul style="list-style-type: none"> - Structured Oral Exam (SOE). - Annual Written Progress Test. - Case-Based Discussion. 	<p>At the end of the first academic year.</p> <p>It can be run weekly at the end of Grade 1.</p>
Skills	<ul style="list-style-type: none"> - Log Book. - DOPS: Direct observation of procedural skills. - Mini-CEX: mini-Clinical. - Research Activities. 	<p>Should be ready before sitting for the final exam.</p> <p>Opportunistically during everyday work (minimum 8 in each academic year). (refer to Appendix 13)</p> <p>Opportunistically during everyday work (minimum 10 in each academic year). (refer to Appendix 12)</p> <p>Once or twice every academic year (minimum once in two years).</p>
Attitude	ITER: In-Training Evaluation Report	After each rotation (Appendix 5-6-7-8)

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

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

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

3-Summative assessment

Comprehensive assessment is a component of the assessment primarily aimed at making informed decisions about the trainee's abilities by the end of the second year of training.

I. Final In-training Evaluation Report (FITER)

In addition to the supervisory committee's approval of the fulfillment of clinical requirements (fellow logbooks), the program director needs to provide a report suitable for each fellow at the end of the final year of training. This report will be the basis for receiving a certificate of completion for the training program and participating in the final special exam.

II. Certification of Training-Completion

To undergo the final special examination, all trainees must obtain a "certification of the training degree, according to the training rules and enforcement policy of the SCFHS.

- a. Successful completion of all training rotations.
- b. The implementation of more detailed training requirements (logbooks, studies, etc.) was approved by the Science Council/Expert Committee.
- c. Educational matters that ensure release from the SCFHS, completion of research funding, and completion of universal topics
- d. The "Certificate of Completion of Training" is issued and approved by the Supervisory Board or its equivalent in accordance with the SCFHS guidelines.

III. Final Specialty Examinations

The final subject exam is a comprehensive evaluation component that grants trainees the ability to complete a subject. It has two components.

- A. Final Written Exam: To participate in this exam, trainees must present a "Certificate of Documents". The exam is in the form of multiple questions.



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 executive administration of assessment.
Skills	<ul style="list-style-type: none"> - Objective Structured Clinical Examination (OSCE). - SOE. 	At least borderline pass in each tool in accordance with the standard setting method used by executive administration of assessment.
Attitude	FITER: In-Training Evaluation Report	Successfully pass their FITER

Example of written exam schedule

Categories	Contents					
	Sections	Proportions	Medical science	Diagnoses	Management	Investigations
Module 1	Skin structure and function / Pathophysiology of burns.	8% of total exam	2	2	3	1
Module 2	Infusion resuscitation / smoke inhalation / intensive care.	15% of total exam	4	3	6	2
Module 3	Anesthesia / pain and pruritus / bandages and skin substitutes.	15% of total exam	4	3	6	2
Module 4	Acute Burn Wound Care /Acute Surgery.	25% of total exam	7	5	10	3
Module 5	Fundamentals of Burn Reconstruction.	15% of total exam	4	3	6	2
Module 6	Burn Rehabilitation/Multidisciplinary Team.	10% of total exam	3	2	3	2

Contents						
Categories	Sections	Proportions	Medical science	Diagnoses	Management	Investigations
Module 7	Medicolegal Practice/ Psychology/ Psychiatry.	6% of total exam	2	1	2	1
Module 8	Research methods and ethics in incineration.	6% of total exam	3	-	3	-

B. Final Exam Clinical/Oral Exam: To qualify for the final clinical/oral exam, the exam must pass the final written exam. It has the following format.

- Objectively structured clinical tests

Example of OSCE Exam Blueprint

No.	Program Component	No of stations	Domains of clinical competence						
			Communication		Examination		Procedures		
			HT	OC	PE	VSI	TP	DP	IATF
			A	B	C	D	E	F	G
1	Burn Care	7	1	1	1	1	1	1	1
2	General Surgery	1			1				
3	Cardiology	1					1		
4	Respiratory	2						1	1
5	Endocrine	1							1
6	Neurology	1			1				
7	Gastrointestinal	1		1					
8	Nephrology	1							1
9	Dermatology	1			1				
10	Hematology	1							1
11	Other	1					1		
Total		18							



- Communication: HT=Focused History Taking, OC=other communication.
- Physical Examination: PE = Physical examination, VSI=Virtual Sign Identification.
- Practical Procedures: DP= Diagnostic Procedure, TP=Therapeutic Procedure,
- IATF=Identification of Abnormal Test Finding.

Exam approval and passing results are based on SCHS training and exam rules.

Certification

The completion of training will only be certified if a fellow successfully completes all program requirements. Candidates who pass all elements of the final health examination will receive a burn surgery scholarship and an intensive care certificate.

12-PROGRAM AND COURSES EVALUATION

The SCFHS uses various scales to assess its implementation. The training results of this program were subject to the quality assurance framework approved by the SCFHS Central Training Committee. The trainee evaluation results (both formative and comprehensive) were analyzed and assigned to the curriculum content. The trainee's annual satisfaction survey will be considered an additional indicator. The Internship Evaluation Report will include the Teachers' Internship Evaluation Report from the Rotation Report, and the Report from the Program Director. The Annual Survey Program certification data is available as is the Report from direct field communication with trainees and trainers. Goal-based assessment: Intended achievement of milestones is assessed at the end of each phase to assess progress in curriculum delivery and lacks. If you use your time, it will be modified in the next phase devoted to the selected trainee themes and professional sessions. In addition to expert opinions and best practices from international benchmarking programs, SCFHS adopts robust methods to ensure that this curriculum utilizes the data that will be available during future revisions of this curriculum. To do



13-POLICIES AND PROCEDURES

This curriculum provides tools and materials that outline the learning goals that students and trainers interact with to achieve identified educational outcomes. The Saudi Commission for Health Specialists (SCFHS) has a complete set of "general law" and "enforcement policy" enforcement policies (posted on the official SCFHS website) that govern all training-related processes. General legislation includes training, evaluation, accreditation, and enforcement directives on admission, registration, ongoing evaluation and promotion, testing, trainee representation and supervision, working hours, and vacations are applicable regulations. Here is an example. Trainees, trainers, and supervisors must apply this curriculum in accordance with the latest laws and guidelines available online (from the official SCFHS website).

14-APPENDICES

- 1- Burn Surgery and Critical Care Fellowship - Interpretation and Procedural Logbook
Adult Critical Care Rotation.
- 2- Burn Surgery and Critical Care Fellowship - Interpretation and Procedural Logbook
Pediatric Critical Care Rotation.
- 3- Burn Surgery and Critical Care Fellowship - Interpretation and Procedural Logbook
ANESTHESIA Rotation.
- 4- Burn Surgery and Critical Care Fellowship - Interpretation and Procedural Logbook
Burn Critical Care Rotation.
- 5- Saudi Burn Critical Care Fellowship
In-Training Evaluation Reports (ITERS) Form
Adult Critical Care Rotation.
- 6- Saudi Burn Critical Care Fellowship
In-Training Evaluation Reports (ITERS) Form
Pediatric Critical Care Rotation.
- 7- Saudi Burn Critical Care Fellowship
In-Training Evaluation Reports (ITERS) Form
ANESTHESIA Rotation.
- 8- Saudi Burn Critical Care Fellowship.
In-Training Evaluation Reports (ITERS) Form.



Burn Critical Care Rotation.

9- Saudi Burn Critical Care Fellowship.

Final in-Training Evaluation Report (FITER) Form.

10-Academic Half-Day Activities.

11- Mini-clinical evaluation exercise (CEX).

12-DOPS assessment form.

13-Logbook Form.

Appendix 1

Burn Surgery and Critical Care Fellowship - Interpretation and Procedural Logbook

Adult Critical Care Rotation

Fellow's Name:

Level of Training: F1 F2 Rotation period: from to

Program director:

Training Center:



Required competencies	Minimum required number		Actual number obtained during this rotation		
	F1	F2			
#	Study date	Hospital MRN	Study type	Diagnosis	Supervisor's signature
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

Appendix 2

Burn Surgery and Critical Care Fellowship - Interpretation and Procedural Logbook

Pediatric Critical Care Rotation

Fellow's Name:

Level of Training: F1 F2 Rotation period: from to

Program director:

Training Center:

Required competencies	Minimum required number		Actual number obtained during this rotation
	F1	F2	

#	Study date	Hospital MRN	Study type	Diagnosis	Supervisor's signature
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

Appendix 3

Burn Surgery and Critical Care Fellowship - Interpretation and Procedural Logbook

ANESTHESIA Rotation

Fellow's Name:

Level of Training: F1 F2 Rotation period: from to

Program director:

Training Center:

Required competencies	Minimum required number		Actual number obtained during this rotation
	F1	F2	

#	Study date	Hospital MRN	Study type	Diagnoses	Supervisor's signature
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					



	Required competencies	Minimum required number		Actual number obtained during this rotation
		F1	F2	
11				
12				
13				
14				
15				
16				

Appendix 4

Burn Surgery and Critical Care Fellowship - Interpretation and Procedural Logbook

Burn Critical Care Rotation

Fellow's Name:

Level of Training: F1 F2 Rotation period: from to

Program director:

Training Center:

Required competencies	Minimum required number		Actual number obtained during this rotation
	F1	F2	

#	Study date	Hospital MRN	Study type	Diagnoses	Supervisor's signature
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

Appendix 5

Saudi Burn Critical Care Fellowship

In-Training Evaluation Reports (ITERS) Form

Adult Critical Care Rotation

Fellow's Name:

Level of Training: F1 F2 Rotation period: from to



Program director:

Training Center:

CanMEDS Competencies (Points/selection)	Meeting Expectations			
	Rarely (1)	Usually (2)	Always (3)	N/A
A. Medical Expert				
B. Communicator				
C. Collaborator				
D. Manager				
E. Health Advocate				
F. Scholar				
G. Professional				

CanMEDS Competencies (Points/selection)	Meeting Expectations			
	Rarely (1)	Usually (2)	Always (3)	N/A
I. Overall Evaluation				
J. Comments				
(I certify that I have read all of the parts of this evaluation report and I have discussed it with the evaluators) Fellow name: _____				
Signature: _____ Date: _____				
Evaluator name: _____				
Signature: _____ Date: _____				
Program director: _____				
Signature: _____ Date: _____				

Appendix 6

Saudi Burn Critical Care Fellowship

In-Training Evaluation Reports (ITERS) Form

Pediatric Critical Care Rotation

Fellow's Name:

Level of Training: F1 F2 Rotation period: from to

Program director:

Training Center:



CanMEDS Competencies (Points/selection)	Meeting Expectations			
	Rarely (1)	Usually (2)	Always (3)	N/A
A. Medical Expert				
B. Communicator				
C. Collaborator				
D. Manager				
E. Health Advocate				
F. Scholar				
G. Professional				
I. Overall Evaluation				

CanMEDS Competencies (Points/selection)	Meeting Expectations			N/A
	Rarely (1)	Usually (2)	Always (3)	
J. Comments				
(I certify that I have read all of the parts of this evaluation report and I have discussed it with the evaluators) Fellow name: _____				
Signature: _____ Date: _____				
Evaluator name: _____				
Signature: _____ Date: _____				
Program director: _____				
Signature: _____ Date: _____				

Appendix 7

Saudi Burn Critical Care Fellowship

In-Training Evaluation Reports (ITERS) Form

ANESTHESIA Rotation

Fellow's Name:

Level of Training: F1 F2 Rotation period: from to

Program director:

Training Center:

CanMEDS Competencies (Points/selection)	Meeting Expectations			N/A
	Rarely (1)	Usual y (2)	Always (3)	
A. Medical Expert				

CanMEDS Competencies (Points/selection)	Meeting Expectations			
	Rarely (1)	Usually (2)	Always (3)	N/A
B. Communicator				
C. Collaborator				
D. Manager				
E. Health Advocate				
F. Scholar				
G. Professional				
I. Overall Evaluation				
J. Comments				

CanMEDS Competencies (Points/selection)	Meeting Expectations			
	Rarely (1)	Usually (2)	Always (3)	N/A
(I certify that I have read all of the parts of this evaluation report and I have discussed it with the evaluators) Fellow name: _____				
Signature: _____ Date: _____				
Evaluator name: _____				
Signature: _____ Date: _____				
Program director: _____				
Signature: _____ Date: _____				

Appendix 8

Saudi Burn Critical Care Fellowship

In-Training Evaluation Reports (ITERS) Form

Burn Critical Care Rotation

Fellow's Name:

Level of Training: F1 F2 Rotation period: from to

Program director:

Training Center:

CanMEDS Competencies (Points/selection)	Meeting Expectations			
	Rarely (1)	Usually (2)	Always (3)	N/A
A. Medical Expert				



CanMEDS Competencies (Points/selection)	Meeting Expectations			
	Rarely (1)	Usually (2)	Always (3)	N/A
B. Communicator				
C. Collaborator				
D. Manager				
E. Health Advocate				
F. Scholar				
G. Professional				
I. Overall Evaluation				
J. Comments				

CanMEDS Competencies (Points/selection)	Meeting Expectations			
	Rarely (1)	Usually (2)	Always (3)	N/A
(I certify that I have read all of the parts of this evaluation report and I have discussed it with the evaluators)				
Fellow name: _____				
Signature: _____				
Date: _____				
Evaluator name: _____				
Signature: _____				
Date: _____				
Program director: _____				
Signature: _____				
Date: _____				

Appendix 9

Saudi Burn Critical Care Fellowship

Final in-Training Evaluation Report (FITER) Form

CanMEDS Competencies	Expectations			
	Rarely meets	Inconsistently	Generally, meets	Exceeds
A. Medical Expert				
At a consultant level:				



CanMEDS Competen cies	Expectations			
	Rar ely mee ts	Inconsist ently	General ly, meets	Exce eds
Procedures and Clinical Skills				
B. Communicator				
C. Collaborator				
D. Manager				
E. Health Advocate				
F. Scholar				

CanMEDS Competen cies	Expectations			
	Rar ely mee ts	Inconsist ently	General ly, meets	Exce eds
G. Professional				
H. Overall Evaluation				
<p>In the opinion of the Fellowship Program Committee, this fellow has acquired the YES NO competencies of the burn critical care fellowship as prescribed in the Objectives of <input type="checkbox"/> <input type="checkbox"/> Training and is sufficiently competent to practice as a specialist.</p> <p>The following sources of information were used for this evaluation:</p> <p><input type="checkbox"/> written examinations <input type="checkbox"/> oral examinations</p> <p><input type="checkbox"/> clinical observations (e.g., ITERs) by <input type="checkbox"/> Structured Assessment of a Clinical faculty members Encounter (STACER)</p> <p><input type="checkbox"/> completion of a scholarly project <input type="checkbox"/> OSCEs</p> <p><input type="checkbox"/> feedback from health care professionals <input type="checkbox"/> other evaluations</p> <p>_____</p> <p><input type="checkbox"/> logbook</p>				
I. Signatures				
<p>(I certify that I have read all of the parts of this evaluation report and that I have discussed it with the evaluators)</p> <p>Fellow name: _____</p> <p>Signature: _____ Date: _____</p> <p>Program director: _____</p> <p>Signature: _____ Date: _____</p> <p>Director of Academic Affairs: _____</p> <p>Signature: _____ Date: _____</p>				



Appendix 10

Academic Half-Day Activities

Num	Date	Topic	Notes	Supervisor
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Case and Oral Presentations

1				
2				
3				
4				
5				

Journal Club Articles

Num	Date	Article/Journal	Notes	Supervisor
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Courses, Conferences, and Meetings attended

Num	Date	Name of activity	Notes	Supervisor
1				
2				
3				
4				
5				
6				
Total				

Publications

Num	Journal	Title	Notes	Tutor
1				
2				



Appendix 11

BURN CRITICAL CARE FELLOWSHIP

MINI-CLINICAL EVALUATION EXERCISE (CEX)

الهيئة السعودية للتخصصات الصحية
Saudi Commission for Health Specialties



Name: _____ **Level of Training:** F1 F2 F3

Hospital: _____ **Rotation:** _____ **Date:** _____

Setting: Ambulatory In-patient Other

Patient: Age: _____ Sex: _____ New Follow-up

Complexity: Low Moderate High

Focus: Data Gathering Diagnosis Therapy Counseling

	UNSATISFACTORY		SATISFACTORY		SUPERIOR	Not Applicable
Medical Interviewing Skills	1	2	3	4	5	N/A
Physical Examination Skills	1	2	3	4	5	N/A
Humanistic Qualities/Professionalism	1	2	3	4	5	N/A
Clinical Judgment	1	2	3	4	5	N/A
Counseling Skills	1	2	3	4	5	N/A
Organization/Efficiency	1	2	3	4	5	N/A
Overall Clinical Competence	1	2	3	4	5	N/A

Mini-CEX Time: Observing _____ Mins Providing Feedback: _____ Mins

Clear Pass >70%	Borderline Pass 60-69.4%	Borderline Fail 50-59.4%	Clear Fail < 50%

Evaluator's Name & Signature

Fellow's Signature

RTP Director's Signature



Appendix 12

BURN CRITICAL CARE FELLOWSHIP
DOPS ASSESSMENT FORM

الهيئة السعودية للتخصصات الصحية
Saudi Commission for Health Specialties



Name: _____ **Level of Training:** **F1** **F2**

Hospital: _____ **Rotation:** _____ **Date:** _____

Setting: Ambulatory In-patient Other

Patient Complexity: **Age:** _____ **Sex:** _____ New Follow-up
 Low Moderate High

Focus: Data Gathering Diagnosis Therapy Counseling

	UNSATISFACTORY	SATISFACTORY	SUPERIOR	Not Applicable		
Medical Interviewing Skills	1	2	3	4	5	N/A
Physical Examination Skills	1	2	3	4	5	N/A
Humanistic Qualities/Professionalism	1	2	3	4	5	N/A
Clinical Judgment	1	2	3	4	5	N/A
Counseling Skills	1	2	3	4	5	N/A
Organization/Efficiency	1	2	3	4	5	N/A
Overall Clinical Competence	1	2	3	4	5	N/A

Mini-CEX Time: **Observing** _____ **Mins** **Providing Feedback:** _____ **Mins**

Clear Pass >70%	Borderline Pass 60-69.4%	Borderline Fail 50-59.4%	Clear Fail < 50%

Evaluator's Name & Signature **Fellow's Signature** **RTP Director's Signature**



Appendix 13

Logbook Form

Burn Critical Care Fellowship - Procedural Logbook

Fellow's Name:

Level of training: • F1 • F2 rotation period: from to

.....

Program director:

Training Center:

#	Date	Hospital MRN	Operation/Procedure	Remarks	Supervisor's signature
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					

