



الهيئة السعودية للتخصصات الصحية
Saudi Commission for Health Specialties

Saudi Diploma for Home Healthcare Physicians



سَبِّحْ لِلَّهِ عَمَّا يُشْرِكُونَ

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INTRODUCTION

Home Health Care (HHC) is a formal, regulated program of care delivered by a variety of health care professionals in the patient's home.¹ HHC services are provided by physicians, nurses, physiotherapists, occupational therapists, speech therapists, home care aids, social workers, dieticians, and drug and equipment suppliers.²

HHC is a growing medical discipline worldwide, as well as in Saudi Arabia, where it fills an important need for our population.¹ Home visits are one of the fastest growing services in the health care system for several reasons. First, because of the increasing number of elderly in our population and associated increases in the number of chronic disease cases and their complications.² Second, limitations in hospital admissions and OPD visits may not correspond to the growing number of elderly, disabled, and chronically ill patients. Third, patients are choosing to receive care at home because of the comfortable home environment, where they have a greater sense of well-being that may help improve their illnesses.³ Fourth, new technologies, pharmaceutical advances, and patients' desire to remain in their homes have combined to dramatically change chronic illness treatment. Fifth, patients with chronic illness are living longer, and patients with acute illness are discharged from hospitals earlier, which increases the need for complex and often less costly care in the home. These factors have facilitated a paradigm shift in medical care delivery from hospital-based care to home-based care. Finally, home health care can be the first option—over hospitals, emergency departments, or nursing homes—whenever care needs can safely be met at home.⁴

Home Health Care in Saudi Arabia

In the Kingdom of Saudi Arabia, home health care services emerged in 1980 as part of the Green Crescent Hospital's emergency program.

King Faisal Specialist Hospital and Research Center implemented HHC service in 1991 under the supervision of a committee to oversee its on-going planning and implementation, following a pilot study indicating that patients and their families benefited from the nursing care and psychosocial support. The study demonstrated that HHC programs reduced the need for hospital admissions, clinic visits, and emergency visits.⁵ King Fahad National Guard Hospital (KFNGH) in Riyadh started HHC in spring 1995, covering all patients referred from KFNGH according to their selection criteria. Home care services started in 1997 at the National Guard Hospital,³ and the Ministry of Health (MOH) started HHC services in March 2009, covering all patients who are eligible to be treated, homebound, need medical services, and live within 70 kilometers of the hospital.

Definition

Home health care provides health services to patients in their house to endorse, keep, or regain health through raising independence and reducing frailty and sickness. Home health care can address a wide spectrum of patient care needs by integrating the physician role into the home health care paradigm.⁶ Effective home-based care requires a collaborative effort among the patient, family, and health care professionals.⁷

HHC Objectives

1. Improve patients' health status and quality of life through comprehensive health care, nursing care, and rehabilitative services

2. Reduce the need for hospitalization, nursing homes, and other institutional placement
3. Provide support for informal caregivers
4. Reduce emergency department visits
5. Reduce hospital length of stay and the risk of hospital readmission
6. Allow terminal patients to die at home in comfort if they wish
7. Enhance the functional potential of patients on life-sustaining devices

Services

HHC provides medical service, nursing care, social service, physiotherapy, respiratory therapy, dietary counseling, supportive psychotherapy, lab services, medications, and equipment according to patients' needs.

Who needs HHC?

Home health care is appropriate for consenting patients whose medical needs can be safely managed at home. Hospitals deliver home health care services to individuals of all ages with acute illnesses, long-term health conditions, permanent disabilities, or terminal illnesses.⁸ These may be patients discharged from the hospital who require post-hospital medical or nursing care that cannot be provided by the family alone.⁹ Home health care also plays a critical role in managing the rapidly increasing number of chronic disease patients. An estimated 20% of patients over age 65 have functional impairments with related HHC needs that are often unrecognized during the typical office visit. Common diagnoses among home health care patients include circulatory disease (31%), heart disease (16%), injury and poisoning (15.9%), musculoskeletal and connective tissue disease (14.1%), and respiratory disease (11.6%).¹⁰ Effective home-based care of chronic disease patients requires patient, family, and professional collaboration.¹¹

The Physician's Role in HHC

HHC starts with a physician recognizing that a patient's condition and resources are appropriate for home care. The physician, in consultation with the referring physician, patient, family, and other members of the home care team, then develops and prescribes a home care treatment plan that may involve other resources.⁵ Thereafter, the physician is responsible for ongoing supervision and determining the medical necessity of continuing home care.⁶

The initial patient evaluation for HHC is an essential step, and the success of the care plan depends on the home health care team and the patient's or caregiver's ability to carry it out.¹² Physician support and encouragement are essential factors in the HHC team and patient compliance with the care plan. Appropriate medical management in the home is a function of the physician's skill in optimizing the patient's independence while utilizing medical and social resources to minimize the effects of illness and disability in the patient's daily life. A subtle but critical distinction between medical management in the home and medical management in the hospital or clinic is the emphasis on the patient's functional abilities, family assistance, and environmental factors. Thorough assessments are generally required to evaluate the patient's and/or family caregiver's ability to implement the care plans, including the risk of caregiver burnout. These assessments have proven valuable in both identifying new medical and psychosocial factors not evident in the hospital.¹³ and preventing further disability.¹⁴ The evaluation begins with a traditional history and physical examination and appropriate laboratory tests. This should include a careful assessment of nutritional risk, especially in older patients

and patients with chronic illness.¹⁵ Screening assessments should also include subjective reports from the patient (and/or family) and the physician's observations during the physical examination. The evaluation process should be sensitive to cultural issues that can influence outcomes.

Rationale of a Home Health Care Diploma for Physicians

With the 2009 introduction of structured home health care services in the Ministry of Health (MOH), MOH HHC service is now provided through more than 450 teams comprising more than 500 physicians.¹⁰ We strive to improve patient care at the home health care level by providing consistent and comprehensive health care in the patient's home, and enhancing professional fulfillment for HHC physicians. Currently, no doctors in the HHC sector today have formal training in HHC. Hence, we need to develop a system to ensure that HHC physicians acquire necessary skills much earlier in their professional careers.

Program Description

The Home Health Care Diploma is a two-year program that equips the physician with educational and clinical experiences in accordance with international HHC standards, by focusing on structured training and close supervision. The candidates will experience both educational sessions and clinical rotations in hospitals and HHC departments.

Aim of the Program

The Home Health Care Diploma program aims to improve the quality of home health care services by graduating competent home health care physicians who can deliver comprehensive and continuous personal medical care in patients' homes and help them to function independently.

General Objectives

At the end of the training, the candidate will be able to:

1. Demonstrate sound knowledge in HHC principles
2. Communicate properly with patients, relatives, and colleagues
3. Maintain high moral and ethical standards
4. Educate and update himself/herself and others in the field
5. Perform thorough and suitably oriented history, physical examinations, and initial patient evaluations
6. Manage common HHC problems and maintain knowledge of management alternatives
7. Provide appropriate preventive care for HHC patients
8. Logically, conservatively, and accurately select and interpret relevant investigations
9. Formulate a reasonable and comprehensive care plan.
10. Demonstrate skill in common diagnostic and therapeutic procedures in geriatric medicine
11. Identify a plan of care for terminally ill patients, based upon a comprehensive interdisciplinary assessment of the patient and family
12. Demonstrate systematic recognition, assessment, and management of palliative cases
13. Demonstrate skill in wound care and dressing material
14. Recognize and appropriately manage emergency situations
15. Advise colleagues from other specialties in HHC-related problems
16. Maintain orderly and informative medical records

DEFINITION OF TERMS

Home Health Care Diploma program: a two-year structured training program for physicians who have successfully passed the Saudi Medical Licensure Examination. Admission criteria are in accordance with the Saudi Commission for Health Specialties (SCFHS).

Rotation: the overall time that the resident will spend in a specific specialty to acquire specific competencies.

D1: a trainee in the first year of training

D2: a trainee in the second year of training

Mandatory rotation: compulsory rotation that the candidate must complete to be promoted to the next level or to graduate from the program.

Elective rotation: rotations that the candidate may choose from any medical specialty.

HHC: home health care

ICU: intensive care unit

PICU: pediatric intensive care unit

ER: emergency room

ADMISSION REQUIREMENTS

To be accepted into the training program, the candidate must fulfill the following requirements as per the SCFHS Admission Requirements for Postgraduate Training Programs (scfhs.org.sa).

ESSENTIAL ATTRIBUTES OF A COMPETENT HOME HEALTH CARE PHYSICIAN

Contextual Aspects

- Understand the context and environment in which home health care doctors work, including their working conditions, community, culture, financial, and regulatory frameworks
- Understand the impact of the local community (including socioeconomic and workplace factors, geography, and culture) on patient care
- Recognize the impact of overall workload on the care provided to the individual patient and the facilities (e.g., staff and equipment) available to deliver that care
- Understand the financial and legal framework in which healthcare is delivered at the practice level
- Understand the impact of the doctor's personal life and working environment on the care that he or she provides

Attitudinal Aspects

- Awareness of one's professional capabilities, values, feelings, and ethics
- Awareness of one's capabilities and values
- Awareness of self; understanding that one's attitudes and feelings impact practice
- Awareness of personal and professional ethics and patient rights
- Awareness of work and personal life interactions and the need for work-life balance

Scientific Aspects

- Adopt a reflective and research-based approach to practice and maintain it through continuous learning and quality improvement
- Become aware of the general principles, methods, and concepts of scientific research and the fundamentals of statistics
- Acquire knowledge of the scientific backgrounds of pathology; the symptoms, diagnosis, therapy, and prognosis of common healthcare problems; epidemiology; decision theory; problem-solving; and preventive healthcare

PROGRAM STRUCTURE AND ROTATIONS

The HHC physician's diploma training program is a two-year full-time program comprising 48 weeks of training plus 4 weeks of annual leave each year. It begins with a one-week introductory course followed by rotations in various specialties in addition to a 6-month rotation in home health care.

Clinical Rotation Structure

- A. Program rotations and clinical experience
 - 1. Residents will rotate through different hospitals, as arranged by the training supervisory committee.
 - 2. At each rotation, the resident will gain a unique experience in patient care.
- B. Clinical duties
 - 1. Clinical duties should comprise a significant part of the resident's development and education.
 - 2. Sufficient time must be made available during which supervising consultants can teach and advise trainees during the performance of these duties.
 - 3. The trainee should be able to conduct the common procedures carried out during the shift.
 - 4. Trainees should care for patients with illness of all severities.
 - 5. In each rotation, the trainee should gain the maximum benefit and meet the rotation goals and objectives.
- C. Case reports. Each resident must choose a minimum of two cases per year in which patients were hospitalized referred to HHC, visit the patient at home on a routine basis and create a short case summary or report for each case, outlining the following:
 - 1. Admission-to-home health care discharge, correct diagnosis, and the condition's progression and complications
 - 2. Discharge and management planning during HHC enrollment
 - 3. In short format and summary, report the clinical outcomes measured during patient care; differences, if any, between home health care and inpatient care; why differences exist, and what are the suggested solutions to help to minimize such gaps
 - 4. List a minimum of three new specific learning points related to the condition or the patient's care and management plan

Home Health Care Program Rotations

D1		D2	
Rotation	Duration (Weeks)	Rotation	Duration (Weeks)
Introductory	1	General Pediatric	8
General IM + Wound Care	8	PICU	4
Adult Neurology	4	Pediatric Neurology	4
Adult Pulmonology	4	Palliative Care	4
Adult Cardiology	4	ICU	4
Adult Endocrinology	4	Mental Health	4
Workshops and simulation	1	Field HHC	16
Emergency	6	Electives	4
Rehabilitation	4		
Field HHC	8		
Electives	4		

ICU: Intensive Care Unit

PICU: Pediatric Intensive Care Unit

CanMEDS HOME HEALTH CARE

Overall Goal

To train specialists who can competently practice HHC independently and apply HHC principles. Mastery of the topics is incorporated into the program at the various academic activity venues.

Medical Expert

At the end of the training, the candidate will be able to:

- Define HHC and describe its basic principles
- Demonstrate knowledge and skill in providing home visits to patients
- Describe the physician's role in managing patients in their homes
- Describe the physical, psychological, social, and spiritual issues faced by patients and their families at home
- Formulate a systematic approach to assessing and handling symptoms
- Develop a management plan that appropriately balances disease specific treatment and symptom management according to the individual needs of the patient and the family
- Monitor the efficacy of symptom management plans at home.
- Plan appropriate management of physical symptoms, particularly pain, dyspnea, constipation, skin care, mouth care, delirium, nausea, and vomiting
- Identify, investigate, and manage related emergencies
- Identify psychological issues associated with life-threatening illnesses and useful strategies for addressing them, particularly anxiety and depression
- Identify the social and existential needs confronting patients and families and useful strategies for addressing them
- Develop a proactive approach to managing patient and family expectations and needs
- Apply a holistic approach to caring for patients and their families

Communicator

At the end of the training, the candidate will be able to:

- Apply effective communication skills in working with patients and their families, including skill in delivering bad news
- Work with the patient and family to establish common, patient-centered care goals
- Explain medical issues to patients and family members in clear and non-medical/technical language
- Communicate effectively with other team members and physicians
- Synthesize and document appropriately concise and informative consultation reports, progress notes, and discharge summaries

Collaborator

At the end of the training, the candidate will be able to:

- Define the roles of other disciplines in providing medical care at home
- Participate in the interdisciplinary care of patients, including family conferences
- Communicate effectively with other team members

- Communicate effectively in consultation and with referring physicians from other specialties
- Identify the community resources available to support patients in their homes
- Demonstrate knowledge of biomedical ethics and its principles
- Outline a general framework for ethical decision-making
- Ensure that patients' privacy and dignity are maintained

Scholar

At the end of the training, the candidate will be able to:

- Act as a role model for other residents and physicians
- Become a role model by demonstrating skillful home care
- Show integrity, honesty, and compassion in patient care
- Access and use the relevant literature to help solve clinical problems
- Apply critical appraisal skills to literature in palliative medicine

Manager

At the end of the training, the candidate will be able to:

- Define community resources available to support patients in their homes
- Work effectively in home health care programs
- Assist institutional home health care programs to develop standards of care consistent with accepted standards
- Articulate the philosophical basis of effective home health care services
- List the current barriers in providing better home health care
- Incorporate accepted standards of home health care and evidence-based decision-making into the practice of caring for patients and their families at home
- Utilize the specific available resources to assist with the care of patients health

Health Advocate

At the end of the training, the candidate will be able to:

- List the social and environmental factors relevant to home health care patients
- Enumerate different models of home health care delivery and their utilization
- List the current barriers to providing effective care to patients at home
- Advocate for the needs of home care patients
- Ensure that patients' privacy and dignity are maintained
- Act as an effective advocate for the rights of patients and their families in clinical situations involving serious ethical considerations

Professional

At the end of the training, the candidate will be able to:

- Commit to a patient and family from the initial consult until the end of care
- Act with integrity, honesty, and compassion in the care of patients
- Be self-aware and practice self-care when caring for ill patients at home

TEACHING AND LEARNING ACTIVITIES

Core Specialty Topics in Home Health Care

1. Acute abdomen
2. Acute gastroenteritis
3. Anemia
4. Anxiety disorders
5. Arthritis
6. Arrhythmia
7. Ascites
8. Back pain
9. Bronchial asthma
10. Cholelithiasis/cholecystitis
11. Common infectious diseases: brucellosis, influenza, dengue fever, viral hepatitis
12. Conjunctivitis (allergic, infective)
13. Convulsion disorders
14. COPD
15. Dehydration
16. Dementia
17. Depression
18. Dermatitis (atopic, contact)
19. Diabetes mellitus
20. Domestic violence (child abuse, spouse abuse, elderly abuse)
21. Dyslipidemia
22. Electrolyte disturbances
23. Enuresis
24. Failure to thrive
25. Fracture of bones
26. Gastro esophageal reflux disorders (GERD)
27. Gastritis and peptic ulcer diseases
28. Headache (migraine, tension headache, etc.)
29. Heart failure
30. Hypertension
31. Hyperplasia of prostate
32. Irritable bowel syndrome (IBS)
33. Ischemic heart disease (IHD)
34. Injuries (pressure injuries, wounds, lacerations, etc.)
35. Incontinence
36. Malignancy
37. Osteoarthritis (OA)
38. Osteoporosis, rickets, vitamin D deficiencies
39. Obesity
40. Pain management
41. Parkinson disease
42. Sleep disorders including OSA and insomnia
43. Stroke, TIA
44. Respiratory failure

45. Renal failure
46. Tuberculosis
47. Thyroid disease
48. Upper and lower respiratory tract infections
49. UTI, renal stone
50. Venous embolism and coagulation disorders

Procedures

1. Corneal foreign body removal
2. Demonstrate peak flow measurement and inhaler techniques
3. Ear wax removal
4. Excision of in-grown nails
5. Incision and drainage of superficial abscesses.
6. Intramuscular, intravenous, subcutaneous, and intra-dermal injection
7. Obtaining an arterial blood gas
8. Perform swabs (throat, eye, ear, wound, vaginal, urethral, etc.)
9. Performing an ECG
10. Peripheral intravenous line, adult and child
11. Removal of foreign body from nose and external ear
12. Scraping for mycology
13. Skills of BLS, ACLS, and ATLS
14. Skin biopsy and excision of skin lesions
15. Soft tissue injections (e.g., planter fasciitis)
16. Splinting and techniques of immobilization of sprained joints and fractures
17. Suturing and laceration repair and suture removal
18. Urine dipstick and microscopy
19. Wound care: debridement, suturing, repair, and dressing
20. Ethics in home health care
21. Care of patient on home ventilator
22. Tracheostomy care
23. Basic physiotherapy
24. Palliative care
25. INR mentoring
26. Ascetic tapping
27. Pleural tapping
28. Drainage of minor abscess
29. Opioid infusion
30. Insulin therapy, continuous glucose monitoring

List of behavioral/communication skills

1. Conveying bad news
2. Discussing prognosis and prognostication
3. Discussing end-of-life issues
4. Advanced care planning and decision making
5. Conducting and leading family meetings
6. Interdisciplinary team coordination and support

Workshops and simulation-based activities

1. Suturing
2. Wound management and pressure ulcer
3. Ventilator management and tracheostomy care
4. Foley-catheter insertion and possible difficulties with it
5. Enteral feeding (nasogastric tube, percutaneous endoscopic gastrostomy (PEG), jejunostomy)
6. Colostomy bag and colostomy care

Educational Activities

Teaching and learning objectives arise from several teaching activities, which include the following:

Morning report

The morning report is a universal component of HHC training. Although there is wide variation in format, attendance, and timing, all residents share the common goal of case presentation for the purpose of educating resident physicians, monitoring patient care, and reviewing management decisions and their outcomes.

The morning report is conducted Sunday through Thursday mornings each week and lasts for 30–45 minutes. The team that have been on call the previous night briefly present and discuss all admitted patients with the audience, with an emphasis on history, clinical findings, differential diagnoses, acute management, and future plans. The chief resident or morning report moderator decides the format or theme of the meeting. The meeting should include short cases, long cases, data interpretation, and a 5-minute topic presentation.

Morning report objectives

- Educate all attending residents, monitor patient care, and review management decisions and their outcomes
- Develop competence in a short presentation of details regarding all admitted patients in a scientific and informative fashion
- Learn about and gain confidence in presenting long cases in a systematic fashion
- Develop appropriate differential diagnoses and suitable management plans
- Give a 5-minute topic presentation on the disease of interest

Morbidity and mortality conferences

Mortality and morbidity conferences are conducted at least once every 4–8 weeks. The program director and department chairperson assign the task to a group of trainees who prepare and present the cases to all department members. The proceedings are generally kept confidential by law.

Morbidity and mortality conference objectives

- Focus on the goal of improving patient care and identifying areas of improvement for clinicians involved in case management
- Prevent errors that lead to complications

- Modify behavior and judgment based on previous experience
- Identify system issues, such as outdated policies and changes in patient identification procedures, that may affect patient care

Grand rounds/guest speaker lectures

These events are presented by experienced senior staff members from different disciplines on a weekly basis. The topics will be selected from core curriculum knowledge.

Grand rounds objectives

- Increase physicians' medical knowledge and skills and ultimately improve patient care
- Understand and apply current HHC practice guidelines
- Describe the latest HHC advances and research
- Identify and explain areas of controversy in HHC

Case presentation

Case presentations are conducted weekly by an assigned resident under the supervision of specialized seniors. The cases presented are those that involve interesting findings, unusual presentation, or difficult diagnosis or management.

Case presentation objectives

- Present a comprehensive history and physical examination with details pertinent to the patient's problem
- Formulate a list of all problems identified in the patient's history and physical examination
- Develop an appropriate differential diagnosis for each problem
- Formulate a diagnosis and treatment plan for each problem
- Present a follow-up patient's case in a focused, problem-based manner that includes pertinent new findings and diagnostic and treatment plans
- Demonstrate a commitment to improving case presentation skills by regularly seeking feedback regarding presentations
- Record and present data accurately and objectively

Journal clubs, critical appraisal, and evidence-based medicine

The journal club meeting is conducted at least once every 4 weeks. The chief resident or program director chooses a new article from a reputed journal and forwards it to one of the senior residents at least 2 weeks prior to the scheduled meeting.

Journal club objectives

- Promote continuing professional development
- Stay abreast of current literature
- Disseminate information and build a debate on good practice
- Ensure that professional practice is evidence based
- Learn and practice critical appraisal skills
- Provide an enjoyable educational and social occasion

Rotational Components of the Curriculum (practice-based)

Bedside-based learning

This presents a good opportunity to instruct small groups of residents, usually those involved in patient care.

Objectives

- Document historical and physical examination findings, including complete written databases, problem lists, and focused subjective, objective, assessment, and plan notes according to accepted formats
- Generate differential diagnoses appropriate to the level of training
- Review admission notes, discharge summaries, and medical reports
- Develop evidence-based management plans
- Interpret lab investigation results (e.g., imaging, ECGs, and blood tests)
- Consult with professionals from other disciplines
- Communicate, including discussing risk factors and prevention, with patients and their families
- Discharge and follow-up plans

On-call duty-based learning

All residents are required to undertake on-call duty shifts as per rotation and Saudi commission policy.

Objectives

- Elicit a comprehensive history and perform a complete physical examination on admission, clearly record the patient's assessment and a differential diagnosis of medical problems, and initiate the management plan
- Discuss the management plan, including investigations and a treatment plan, with seniors
- Communicate the plan to the nurse assigned to patient care
- Perform the basic procedures necessary for diagnosis and management

Clinic-based learning (CBL)

Residents are strictly prohibited from covering home visits without supervision.

Objectives

- Elicit a focused history and perform a physical examination under the supervision of the consultant or senior staff
- Present clinical findings, in brief, to the attending consultant or senior staff
- Discuss differential diagnoses and management plans with attending consultants
- Record patients' assessments, differential diagnoses, and management plans
- Develop communication skills with the attending consultant

Self-directed learning

Objectives

- Achieve personal learning goals beyond those of the essential core curriculum
- Maintain a personal portfolio (self-assessment, reflective learning, and personal development plan)
- Audit and research projects
- Read journals
- Attend training programs organized on a regional basis (e.g., symposia, conferences, and board reviews)

Universal e-learning topics

The Saudi Commission for Health Specialties intends to develop an e-learning platform to deliver high value, interdisciplinary topics of the utmost importance to the trainee to ensure that they receive high quality teaching and develop essential core knowledge. The topics are common to all specialties and are delivered in a modular fashion. At the end of each learning unit, there is an on-line formative assessment. Upon completion of all topics, trainees undertake a combined summative assessment in the form of context-rich multiple-choice questions (MCQ) in which they must attain minimum competency.

Academic Half-Day Activities (AHD)

The academic half day consists of several types of sessions scheduled by the chief resident and program director. It is based on previous years' feedback from residents, and includes:

- Emergency lectures
- Communication skills
- Demonstration and practice of procedures
- Clinical problem solving
- Medical research and statistics

This is protected teaching time and attendance is mandatory for all HHC residents. The activities are conducted on a weekly basis between 1:00 and 4:00 P.M.

Emergency and nonemergency topics lectures

Lectures concerning emergency and nonemergency conditions are prepared and presented by a senior staff member. The series of topics is repeated annually to ensure adequate coverage.

Objectives

- Review common emergency and nonemergency situations with respect to diagnosis and management

Approaches to common conditions and symptoms

These are lecture series that present systematic approaches to common medical conditions, with symptoms prepared and presented by a junior resident during academic half days under the supervision of a specialized senior staff member. These series are repeated annually.

Objectives

- Demonstrate diagnostic and therapeutic skills
- Access and apply relevant information to clinical practice
- Practice contemporary, evidence-based, and cost-effective medicine
- Avoid unnecessary or harmful investigations or management

Clinical skills

Most clinical skills sessions will be conducted at the bedside in hospital or at home. This includes taking history, conducting physical examinations, and communication skills. However, lectures and video demonstrations can be added to academic half-day activities prior to bedside practice.

Objectives

- Recognize the many facets of the doctor-patient relationship and be able to apply a biopsychosocial model to issues in health and medicine
- Master basic interview and communication skills and demonstrate competence in advanced interview and communication skills
- Master basic physical examination skills and be able to perform and interpret focused examinations of the cardiovascular, pulmonary, musculoskeletal, and neurological systems, breasts, and genitalia in men and women
- Exhibit professional behaviors including the demonstration of respect for patients, colleagues, faculty members, and others in all settings
- Help residents to pass clinical exams

Communication skills (Table 1)

The competencies for this role are essential for establishing rapport and trust, formulating a diagnosis, delivering information, striving for mutual understanding, and facilitating a shared care plan. Poor communication can lead to undesirable results; effective communication is critical for optimal patient outcomes. Physicians enable patient-centered therapeutic communication via decision-making and effective dynamic interactions with patients, families, caregivers, fellow professionals, and other important individuals.

A series of communication skills lectures concerning common situations is delivered by experienced staff members regularly during academic half days and repeated annually.

Medical ethics (Table 2)

Ethical issues are frequently encountered during clinical practice and discussing the medicolegal aspects of care with experts is of paramount importance for better and safer training and practice. A senior staff member will raise a particular medicolegal issue to be discussed interactively with residents during academic half days.

Objectives

- Recognize the humanistic and ethical aspects of a career in medicine
- Examine and affirm personal and professional moral commitments
- Equip residents with a foundation of philosophical, social, and legal knowledge
- Apply knowledge that has been gained in clinical reasoning and provide residents with the skills required to apply this insight, knowledge, and reasoning to clinical care

Data interpretation

A full range of laboratory data encountered during daily practice (e.g., blood tests, electrocardiograms [ECGs], and photographs) is presented during academic half days. A case-based approach is used to assist trainees in digesting and understanding the plethora of investigations with which they should be familiar. All residents are expected to participate actively in this activity.

Objectives

- Gain knowledge of the various investigational tools used in HHC
- Enhance proper interpretation of different investigational data
- Enhance proper use of investigational tools
- Discuss the advantages and limitations of various investigational tools

Research and evidence-based practice (Table 3)

The Saudi Commission for Health Specialties promotes and supports research conducted by trainees. Therefore, residents are expected to participate in annual research projects. The presentation and dissemination of the work occurs during formal resident research days held annually at various centers.

These projects are not necessarily required to result in publications or national or international presentations. However, outstanding projects and interested residents are supported and mentored if presentations or publications are appropriate

Objectives

- Become familiar with the generation and dissemination of research via oral presentations, poster presentations, and abstract preparation and attend core academic teaching applicable to research, including ethics, study design, abstract writing, and presentation skills
- Gain competence in conducting literature reviews, data synthesis and analysis, and interpretation

Universal Topics

These topics are common to all specialties and are delivered in a modular fashion. At the end of each learning unit, there is an on-line formative assessment.

Module 1: Introduction

1. Safe drug prescription
2. Hospital-acquired infections
3. Sepsis, systemic inflammatory response syndrome (SIRS), and disseminated intravascular coagulation (DIC)
4. Antibiotic stewardship
5. Blood transfusion

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

- A. Recognize the importance of safe drug prescription in healthcare

- B. Describe various adverse drug reactions with examples of commonly prescribed drugs that can cause them
- C. Apply the principles of drug–drug interactions, drug–disease interactions, and drug–food interactions in common situations
- D. Apply the principles of prescribing drugs in special situations such as renal failure and liver failure
- E. Apply the principles of prescribing drugs in elderly, pediatric, pregnant, and lactating patient groups
- F. Promote evidence-based, cost-effective prescription
- G. Discuss the ethical and legal frameworks governing safe-drug prescription in Saudi Arabia

Hospital-acquired infections (HAI): Upon completion of the learning unit, you should be able to:

- A. Discuss the epidemiology of HAI with special reference to Saudi Arabia
- B. Recognize HAI as one of the major emerging threats in healthcare
- C. Identify the common sources of and circumstances surrounding HAI
- D. Describe the risk factors for common HAIs such as ventilator-associated pneumonia, methicillin-resistant staphylococcus aureus, central line-associated bloodstream infections, and vancomycin-resistant enterococcus
- E. Identify the role of healthcare workers in preventing HAI
- F. Determine appropriate pharmacological (e.g., selected antibiotics) and nonpharmacological (e.g., removal of indwelling catheters) measures in the treatment of HAI
- G. Propose a plan to prevent HAI in the workplace

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

- A. Explain the pathogenesis of sepsis, SIRS, and DIC
- B. Identify patient-related and nonpatient-related predisposing factors of sepsis, SIRS, and DIC
- C. Recognize patients at risk of developing sepsis, SIRS, and DIC
- D. Describe the complications of sepsis, SIRS, and DIC
- E. Apply the principles of management of patients with sepsis, SIRS, and DIC
- F. Describe the prognosis of sepsis, SIRS, and DIC

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

- A. Recognize antibiotic resistance as one of the most pressing global public health threats
- B. Describe the mechanism of antibiotic resistance
- C. Determine appropriate and inappropriate use of antibiotics
- D. Develop a plan for safe and proper antibiotic use that includes the correct indications, duration, types, and discontinuation
- E. Be aware of local guidelines for the prevention of antibiotic resistance

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

- A. Review the different components of blood products available for transfusion
- B. Recognize the indications and contraindications of blood product transfusion
- C. Discuss transfusion benefits, risks, and alternatives
- D. Obtain consent for specific blood product transfusion

- E. Perform the necessary steps for safe transfusion
- F. Develop an understanding of the special precautions and necessary procedures during massive transfusions
- G. Recognize transfusion-associated reactions and provide immediate management

Module 2: Cancer

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

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

- A. Discuss the basic principles of cancer staging and grading
- B. Enumerate the basic principles (e.g., indications, mechanisms, and types) of:
 - a. Cancer surgery
 - b. Chemotherapy
 - c. Radiotherapy
 - d. Immunotherapy
 - e. Hormone therapy

Side effects of chemotherapy and radiation therapy: Upon completion of the learning unit, you should be able to:

- A. Describe the important (e.g., frequent and life- and organ-threatening) side effects of common chemotherapy drugs
- B. Explain the principles of monitoring side effects in patients undergoing chemotherapy
- C. Describe the measures (pharmacological and nonpharmacological) available to ameliorate the side effects of commonly prescribed chemotherapy drugs
- D. Describe the important (e.g., common and life-threatening) side effects of radiation therapy
- E. Describe the measures (pharmacological and nonpharmacological) available to ameliorate the side effects of radiotherapy

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

- A. Enumerate the important oncological emergencies encountered in both hospital and ambulatory settings
- B. Discuss the pathogeneses of important oncological emergencies
- C. Recognize oncological emergencies
- D. Institute immediate measures when treating patients with oncological emergencies
- E. Use an anticipatory manner to counsel patients in recognizing and preventing oncological emergencies

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

- A. Conclude that many major cancers are preventable
- B. Identify smoking prevention and lifestyle modifications as major preventable measures
- C. Recognize preventable cancers

- D. Discuss the major cancer prevention strategies at both individual and national levels
- E. Use a proactive manner to counsel patients and families regarding cancer prevention measures, including screening

Surveillance and follow up of cancer patients: Upon completion of the learning unit, you should be able to:

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

Module 3: Diabetes and metabolic disorders

1. Recognition and management of diabetic emergencies
2. Management of diabetic complications
3. Comorbidities of obesity
4. Abnormal ECG

Recognition and management of diabetic emergencies: Upon completion of the learning unit, you should be able to:

- A. Describe the pathogeneses of common diabetic emergencies including their complications
- B. Identify risk factors for and groups of patients vulnerable to such emergencies
- C. Recognize patients presenting with diabetic emergencies
- D. Institute immediate management
- E. Refer patients to the appropriate subsequent level of care
- F. Counsel patients and their families in preventing such emergencies

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

- A. Describe the pathogeneses of the important complications of Type 2 diabetes mellitus
- B. Screen patients for such complications
- C. Provide preventive measures for such complications
- D. Treat such complications
- E. Counsel patients and families, with special emphasis on prevention

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

- A. Screen patients for the presence of common and important obesity comorbidities
- B. Manage obesity-related comorbidities
- C. Provide dietary and lifestyle advice for preventing and managing obesity

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

- A. Recognize common and important ECG abnormalities
- B. Institute immediate management if necessary

Module 4: Medical and surgical emergencies

1. Management of acute chest pain
2. Management of acute breathlessness

3. Management of altered sensorium
4. Management of hypotension and hypertension
5. Management of upper GI bleeding
6. Management of lower GI bleeding

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

- A. Triage and categorize patients
- B. Identify patients who require prompt medical and surgical attention
- C. Generate preliminary diagnoses based on history and physical examination
- D. Order and interpret urgent investigations
- E. Provide patients with appropriate immediate management
- F. Refer patients to the subsequent level of care if required

Module 5: Chronic care

1. Preoperative assessment
2. Postoperative care
3. Acute pain management
4. Chronic pain management
5. Management of fluid for patients at home
6. Management of acid-base and electrolyte imbalances

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

- A. Describe the basic principles of preoperative assessment
 - a. Perform preoperative assessment in uncomplicated patients, with a special emphasis on
 - b. General health assessment
 - c. Cardiorespiratory assessment
 - d. Medications and medical device assessment
 - e. Drug allergy
 - f. Pain relief requirements
- B. Categorize patients according to risk

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

- A. Devise a postoperative care plan including monitoring vital signs, pain management, fluid management, medication, and laboratory investigations
- B. Handover patients properly to appropriate facilities
- C. Describe the process of postoperative recovery
- D. Identify common postoperative complications
- E. Monitor patients for possible postoperative complications
- F. Institute immediate management of postoperative complications

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

- A. Review the physiological basis of pain perception
- B. Proactively identify patients who might be in acute pain
- C. Assess patients experiencing acute pain
- D. Apply the various pharmacological and nonpharmacological modalities available for acute pain management

- E. Provide adequate pain relief for uncomplicated patients with acute pain
- F. Identify and refer patients experiencing acute pain who may benefit from specialized pain services

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

- A. Review biopsychosocial and physiological bases of chronic pain perception
- B. Discuss the various pharmacological and nonpharmacological options available for chronic pain management
- C. Provide adequate pain relief for uncomplicated patients with chronic pain
- D. Identify and refer patients experiencing chronic pain who may benefit from specialized pain services

Management of fluid for patients at home: Upon completion of the learning unit, you should be able to:

- A. Review the physiological basis of water balance in the body
- B. Assess patients' hydration status
- C. Recognize patients who are dehydrated or overhydrated
- D. Order fluid therapy (oral and intravenous) for patients at home
- E. Monitor fluid status and response to therapy via history, physical examination, and selected laboratory investigations

Management of acid-base and electrolyte imbalances: Upon completion of the learning unit, you should be able to:

- A. Review the physiological basis of electrolyte and acid-base balance in the body
- B. Identify diseases and conditions that are associated with or likely to cause acid-base and electrolyte imbalances
- C. Correct electrolyte and acid-base imbalances
- D. Perform careful calculations, checks, and other safety measures while correcting acid-base and electrolyte imbalances
- E. Monitor patient response to therapy via history, physical examination, and selected laboratory investigations

Module 6: Frail elderly patients

1. Assessment of frail elderly patients
2. Recognize delirium and differentiation from dementia
3. Prescribing drugs for elderly patients
4. Care of elderly patients

Assessment of frail elderly patients: Upon completion of the learning unit, you should be able to:

- A. Enumerate the differences and similarities between comprehensive assessments of elderly and other patients
- B. Perform comprehensive assessments of frail elderly patients, with special emphasis on social factors, functional status, quality of life, diet and nutrition, and medication history, in conjunction with other members of healthcare teams
- C. Develop problem lists based on the assessment of elderly patients

Recognize delirium and differentiation from dementia: Upon completion of the learning unit, you should be able to:

- A. Recognize delirium and use tools such as CAM to diagnose it
- B. Identify the cause of delirium by conducting a comprehensive physical examination and complete panel of tests
- C. Screen patients for cognitive impairment using the mini-Cog and other tools
- D. Recognize and manage patients with dementia

Prescribing drugs for elderly patients: Upon completion of the learning unit, you should be able to:

- A. Discuss the principles of prescription for elderly patients
- B. Recognize polypharmacy, prescribing cascade, inappropriate dosage, inappropriate drugs, and deliberate drug exclusion as major causes of morbidity in elderly patients
- C. Describe physiological and functional decline in elderly patients that contributes to increased drug-related adverse events
- D. Discuss drug–drug interactions and drug–disease interactions in elderly patients
- E. Be familiar with the Beers criteria
- F. Develop rational prescription habits for elderly patients
- G. Counsel elderly patients and their families regarding safe medication use

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

- A. Describe the factors that should be considered while planning care for elderly patients
- B. Recognize the needs and well-being of caregivers
- C. Identify local and community resources available for the care of elderly patients
- D. Develop individualized care plans for elderly patients, with input from other healthcare professionals

Module 7: Ethics and healthcare

1. Occupational hazards for healthcare workers (HCWs)
2. Patient advocacy
3. Ethical issues: transplantation, organ harvesting, and withdrawal of care
4. Ethical issues: treatment refusal and patient autonomy
5. The role of doctors in death and dying

Occupational hazards for healthcare workers (HCWs): Upon completion of the learning unit, you should be able to:

- A. Recognize common sources of and risk factors for occupational hazards in HCWs
- B. Describe common occupational hazards in the workplace
- C. Develop familiarity with the legal and regulatory frameworks governing occupational hazards in HCWs
- D. Develop a proactive attitude to promoting workplace safety
- E. Protect yourself and colleagues against potential occupational hazards in the workplace

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

- A. Define patient advocacy
- B. Recognize patient advocacy as a core value that governs medical practice
- C. Describe the role of patient advocates in the care of the patients

- D. Develop a positive attitude toward patient advocacy
- E. Be a patient advocate in conflictive situations
- F. Be familiar with local and national patient advocacy groups

Ethical issues: transplantation, organ harvesting, and withdrawal of care: Upon completion of the learning unit, you should be able to:

- A. Apply the key ethical and religious principles governing organ transplantation and withdrawal of care
- B. Be familiar with the legal and regulatory guidelines regarding organ transplantation and withdrawal of care
- C. Counsel patients and their families in light of applicable ethical and religious principles
- D. Guide patients and their families in making informed decisions

Ethical issues: treatment refusal and patient autonomy: Upon completion of the learning unit, you should be able to:

- A. Predict situations in which patients or their family members are likely to refuse prescribed treatment
- B. Describe the concept of the “rational adult” in the context of patient autonomy and treatment refusal
- C. Analyze key ethical, moral, and regulatory dilemmas in treatment refusal
- D. Recognize the importance of patient autonomy in the decision-making process
- E. Counsel patients or family members who refuse medical treatment in the best interest of patients

Role of doctors in death and dying: Upon completion of the learning unit, you should be able to:

- A. Recognize the important role a doctor can play during the dying process
- B. Provide emotional and physical care to dying patients and their families
- C. Provide appropriate pain management for dying patients
- D. Identify suitable patients and refer them to palliative care services

TABLE OF TEACHING AND LEARNING ACTIVITIES LINKED TO CanMEDS

ACTIVITY	OBJECTIVES	CanMEDS COMPETENCIES	COMMENTS
DIDACTIC CENTRALIZED COMPONENT OF THE CURRICULUM			
1. MORNING MEETING			
a. Morning report	<ul style="list-style-type: none"> • To teach monitoring patient care and reviewing management decisions and their outcomes for all attending residents • To develop competence in the short presentation of details of all admitted patients in a scientific and informative fashion • To learn about and gain confidence in presenting long case details in a systematic fashion • To develop appropriate differential diagnoses and proper management plans • To present topics regarding the disease of interest lasting 5 min 	Manager Medical expert Professional Scholar	The presenter's performance should be evaluated
b. Morbidity and mortality report	<ul style="list-style-type: none"> • To focus on the goal of improving patient care and identify areas of improvement for clinicians involved in case management • To prevent errors that lead to complications 	Professional Manager Medical experts	Records of proceedings are kept confidential

TEACHING AND LEARNING ACTIVITIES

	<ul style="list-style-type: none"> To modify behavior and judgment based on previous experience To identify systems issues, such as outdated policies and changes in patient identification procedures, that may affect patient care The proceedings are generally kept confidential by law 		
c. Grand rounds/guest speaker lectures	<ul style="list-style-type: none"> Increase physicians' medical knowledge and skills and ultimately improve patient care Understand and apply current practice guidelines in the field of HHC and its branches Describe the latest advances in research in the field of HHC Identify and explain areas of controversy in the field of HHC 	Medical expert Professional	The presenter is a senior staff member
d. Case presentation	<ul style="list-style-type: none"> Be able to present a comprehensive history and physical examination with details pertinent to the patient's problem Formulate a list of all problems identified in the patient history and physical examination Develop a proper differential diagnosis for each problem Formulate a diagnosis/treatment plan for each problem 	Medical expert Scholar	Records of proceedings are kept confidential

TEACHING AND LEARNING ACTIVITIES

	<ul style="list-style-type: none"> • Present a follow-up patient's case in a focused, problem-based manner that includes pertinent new findings and diagnostic and treatment plans • Demonstrate a commitment to improving case presentation skills by regularly seeking feedback regarding presentations • Residents should record and present data accurately and objectively 		
e. Journal clubs, critical appraisal, and evidence-based medicine	<ul style="list-style-type: none"> • To promote continuing professional development • Remaining abreast of current literature • Disseminating information and building a debate on good practice • Ensuring that professional practice is evidence based • Learning and practicing critical appraisal skills • Providing an enjoyable educational and social occasion 	Medical expert Scholar Health advocate	The presenter is a senior resident under supervision of a senior staff member
2. ACADEMIC HALF DAY (AHD)			
a. Lectures on emergency and nonemergency topics	<ul style="list-style-type: none"> • Review common emergency and nonemergency situations with respect to diagnosis and management 	Medical expert Scholar	Topics are listed in Tables 1 & 2

TEACHING AND LEARNING ACTIVITIES

	<ul style="list-style-type: none"> The series of topics will be repeated annually to ensure adequate attainment 		
b. Procedures	<ul style="list-style-type: none"> Apply knowledge and technique expertise in performing procedures, interpreting results, and understanding relevant limitations Demonstrate effective, appropriate, and timely performance of therapeutic procedures Demonstrate evidence-based physical examination skills that are relevant and precise Learn ultrasound-guided procedures For each procedure, residents should master the following: <ul style="list-style-type: none"> Indications Contraindications Complications and complication rate Procedural technique Sterile technique Consent for the procedure Be able to demonstrate procedures on a task trainer Be familiar with ultrasound technology in general Reporting complications 	Medical expert Professional Collaborator	<p>Will be repeated annually</p> <p>Some procedures can be performed unsupervised, supervised, or simply viewed via video</p>

TEACHING AND LEARNING ACTIVITIES

<p>c. Approaches to common conditions and symptoms</p>	<ul style="list-style-type: none"> • Demonstrate diagnostic and therapeutic skills • Access and apply relevant information to clinical practice • Practice contemporary, evidence-based, and cost-effective medicine • Avoid unnecessary or harmful investigations or management 	<p>Medical expert Scholar Professional</p>	<p>The presenters are junior residents</p> <p>The performance of the presenter should be evaluated</p> <p>Conditions and symptoms are listed in Table 3</p> <p>Will be repeated annually</p>
<p>d. Clinical skills</p>	<ul style="list-style-type: none"> • Recognize the many facets of the doctor-patient relationship and be able to apply a biopsychosocial model to issues in health and medicine • Master basic interviewing skills and demonstrate competence in advanced interviewing skills • Master basic skills in physical examination and be able to perform and interpret focused examinations of the cardiovascular, pulmonary, musculoskeletal, and neurological systems, breasts, and genitalia of men and women 	<p>Medical expert Scholar Communicator Professional</p>	<p>Sessions are listed in Table 4</p> <p>Will be repeated annually</p> <p>Conducted by a senior staff member</p>

TEACHING AND LEARNING ACTIVITIES

	<ul style="list-style-type: none"> Exhibit professional behaviors including demonstration of respect for patients, colleagues, faculty members, and others in all settings Help the resident to pass clinical exams 		
e. Communication skills	<p>Recognize the many facets of the doctor-patient relationship and be able to apply a biopsychosocial model to issues in health and medicine</p> <ul style="list-style-type: none"> Enable patient-centered therapeutic communication via shared decision making and effective dynamic interactions with patients, families, caregivers, fellow professionals, and other important individuals Master basic interviewing skills and demonstrate competence in advanced interviewing skills <p>Exhibit professional behaviors including demonstration of respect for patients, colleagues, faculty members, and others in all settings</p>	Communicator Professional	See Table 5 Presenters are experienced senior staff members
f. Medical ethics	<ul style="list-style-type: none"> Residents should recognize the humanistic and ethical aspects of a medical career Enable the residents to examine and affirm their personal and professional moral commitments 	Communicator Medical expert Professional'	A series of lectures will be conducted by an experienced senior staff member

TEACHING AND LEARNING ACTIVITIES

	<ul style="list-style-type: none"> • Provide the residents with a foundation of philosophical, social, and legal knowledge • Enable residents to use their knowledge in clinical reasoning and equip them with the interaction skills required to apply this insight, knowledge, and reasoning to human clinical care 		
g. Data interpretation	<ul style="list-style-type: none"> • Knowledge of the various investigational tools used in HHC • Enhance proper interpretation of different investigational data • Enhance proper use of investigational tools • Knowledge of the limitations of the various investigational tools 	Medical expert Scholar	Residents should take the initiative and participate actively
h. Research and evidence-based practice	<ul style="list-style-type: none"> • Become familiar with the generation and dissemination of research via oral presentations, poster presentations, and abstract preparation • To attend core academic teaching applicable to research including ethics, study design, abstract writing, and presentation skills • Gain competence in literature review, data synthesis and analysis, and interpretation 	Professional Manager Scholar	See Table 7 Experienced senior staff will be involved

ROTATIONAL (PRACTICE-BASED) COMPONENT OF THE CURRICULUM			
<p>a. Daily round-based learning</p>	<ul style="list-style-type: none"> • Document historical and physical examination findings according to accepted formats including complete written databases; problem lists; and focused subjective, objective, assessment, and plan notes • Generate differential diagnoses appropriate to the level of training • Review admission notes, discharge summaries, and medical reports • Develop evidence-based management plans • Interpret lab investigation results (e.g., imaging, ECG, and blood tests) • Consult with professionals of other disciplines • Communicate, including discussing risk factors and prevention, with patients and their families • Risk factors counseling • Discharge and follow-up plans 	<p>Medical expert Communicator Health advocate Professional</p>	<p>Must be centered on patient care and safety</p>
<p>b. On-call-duty-based learning</p>	<ul style="list-style-type: none"> • Elicit a comprehensive history and perform a complete physical examination on admission, record patients' assessments and differential diagnoses of medical problems clearly, and initiate the management plans 	<p>Medical expert Scholar Health advocate Professional</p>	<p>Must be centered on patient care and safety</p> <p>Under supervision of a senior</p>

TEACHING AND LEARNING ACTIVITIES

	<ul style="list-style-type: none"> • Discuss the plan of management, including investigations and treatment plan, with the seniors • Communicate the plan to the nurse assigned to patient care • Perform the basic procedures necessary for diagnosis and management 		
c. Clinic-based learning	<ul style="list-style-type: none"> • Elicit a focused history and perform a physical examination under the supervision of a consultant or senior resident • Present clinical findings, in brief, to the attending consultant or senior resident • Discuss differential diagnoses and management plans with attending consultants or senior residents • Record patients' assessments, differential diagnoses, and management plans • Learn communication skills from the attending consultant or senior resident 	Medical expert Communicator Health advocate	<p>Must be centered on patient care and safety</p> <p>Under the supervision of a senior staff member</p>
d. Self-directed learning	<ul style="list-style-type: none"> • Achieving personal learning goals beyond the essential core curriculum • Maintaining a personal portfolio (self-assessment, reflective learning, and a personal development plan) 	Medical expert Scholar Manager Professional	See the recommended e- learning modules, books, journals, and other materials below

TEACHING AND LEARNING ACTIVITIES

	<ul style="list-style-type: none">• Auditing and researching projects• Reading journals• Attending training programs organized on a regional basis (e.g., symposia, conferences, and board reviews)• Universal e-learning topics (modules)		
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Table 1: Communication situations

COMMUNICATION SITUATION	PRESENTER	DATE
o Dealing with medical errors		
o Documentation		
o Breaking bad news		
o Expressing empathy		
o Dealing with patient emotions (anger, fear, and sadness)		
o Cultural diversity		
o End-of-life discussion		
o Informed consent		
o Special needs patients (learning disabilities and low literacy)		
o Disclosing adverse events		
o Establishing boundaries		
o Explaining diagnosis, investigation, and treatment		
o Involving the patient in decision making		
o Communicating with relatives and dealing with difficult patients/families		
o Communicating with other healthcare professionals		
o Seeking informed consent/clarification for an invasive procedure or obtaining consent for a postmortem		
o Providing instructions regarding discharge		
o Providing advice regarding lifestyle, health promotion, or risk factors		

Table 2: Ethical issues in medicine

ETHICAL ISSUE	PRESENTER	DATE
1. Principles of medical ethics		
2. Code of conduct and professionalism		
3. Ethical issues in human reproduction		
4. Ethical aspects of treating patients with STDs/AIDS		
5. Good death		
6. Principles of research ethics		
7. Consent		
8. Truth telling		
9. Confidentiality and patient autonomy		
10. Improving ethical practices in ward setting		
11. Ethics in treating terminally ill patients		
12. Ethics and moral aspects of genetics		
13. Ethics in treating mentally ill patients		
14. Medical negligence and professional misconduct		
15. Ethics of transplantation and organ donation		
16. Principles of resource allocation in healthcare systems		
17. Resource allocation in healthcare systems		
18. Withholding treatment and euthanasia		
19. Professional misconduct and negligence		
20. Ethics in reproduction including abortion		

AIDS: acquired immune deficiency syndrome; STD: sexually transmitted disease

Table 3: Evidence-based medicine and clinical research

TOPIC	PRESENTER	DATE
1. Evidence-based practice definition and applications		
2. Biostatistics		
3. Research methodology		
4. How to start your research project		
5. How to write and publish your paper		

PROGRAM ROTATIONS

Introductory Course of Home Health Care

Duration: 1 week

Description

During this week, the trainee will learn about the seven CanMEDS home health care core competencies, the structure of the program, and assessment. The general goal of the rotation is to gain knowledge of the HHC definition and the main principles of providing health care in settings outside the hospital.

Objectives

- Identify the training objectives, rules, and regulations
- Explain the training and examination regulations
- Describe the principles of adult learning
- Explain all forms of assessments (logbook, MiniCEX, etc.)
- Define home health care
- Identify the basic principles of home health care
- Identify the role and scope of a home health care doctor
- Identify the principles of communication skills
- Review the knowledge and skill needed to provide home visits to patients
- Define the physician's role in managing patients in their homes
- Identify the principles of quality improvement and importance of patient safety in home health care
- Apply infection control measures in home health care
- Prepare an effective presentation

Field Work in Home Health Care Department

Duration: 8 weeks in 1st year; 16 weeks in 2nd year

Description

The general goal of this rotation is to gain experience and expertise in assessment, investigation, and appropriate management of patients at home or in other settings outside the hospital. Residents are required to develop a core pool of 8-12 home healthcare patients that they will follow-up over an extended period of time during their training.

Objectives

During this rotation, the trainee should:

- Become experienced with accessing community resources and working with the full range of team members
- Become familiar with decision-making and family caregiver support at home
- Develop independent skills in home assessment and interventions that are practical, effective, and appropriate to the patient's wishes
- Develop communication skills with families, community team members, and family practitioners regarding on-going patient management at home

- Become experienced in planning and anticipating medical needs at home according to the patient's condition
- Identify issues in managing patients at home, relevant to different cultures, spiritual beliefs, and traditions
- Master the skills needed to work with patients' families and understand the elements comprising good home care
- Be knowledgeable about and capable of providing home visits to patients
- Be aware of the community resources available to support patients in their homes
- Manage the roles of physicians and specialists in patients' home health care
- Understand the physicians' role in supporting the home care team
- Apply an approach to managing different physical symptoms and disorders at home, including dyspnea, cough, skin care, mouth care, terminal agitation, delirium, fatigue, anorexia, nausea and vomiting, constipation, depression, anxiety, and the syndrome of imminent death.

Hospital Rotations

A significant proportion of medical problems, both acute and chronic, are frequently encountered in home health care. Therefore, to experience the HHC physician role and the scope of HHC, trainees must have adequate specialty experience that will facilitate confidence and competency in assessment and overall management of common medical problems.

At the end of the rotation, the trainee should acquire knowledge, skills, and attitudes, and demonstrate the core competencies described below.

Guidelines

- Hospital rotations can be done in any sequence after the introductory course.
- During a hospital rotation, the resident should comply with all responsibilities, including (but not limited to) on calls and procedures.
- Rotations that include inpatient settings cannot be changed to the outpatient department (OPD)/ field.
- In field rotation, candidates should attend a minimum of 15 visits per week.

Content

Candidates should acquire the core knowledge and skills expected by the Saudi Diploma of HHC physicians as described for each rotation.

General Medicine + Wound Care

Duration: 8 weeks

Description

The general internal medicine rotation is mandatory and is a core rotation for all residents. Residents on rotation in general internal medicine departments must develop all CanMEDS core competencies while learning the basic skills required to diagnose and manage a broad range of medical conditions affecting adolescents and adults. Residents should focus on undifferentiated patient problems as well as those that emerge in previously diagnosed patients. Residents should practice progressive responsibility and self-directedness in dealing with patients and their families and be able to act as primary care providers for patients with multiple comorbidities.

Objectives

- Describe the seven CanMEDS core competencies and demonstrate the basic skills required for diagnosing and managing a broad range of general medical conditions affecting adolescents and adults
- Discuss the relevant basic sciences, including pathophysiology, drug therapy, and the microbial basis of diseases involving the key presenting problems and conditions listed below
- Order appropriate and selective investigations and interpret the findings in the context of patients' complaints
- Perform a complete health assessment that includes a focused physical examination and assessment of the patient's mental state
- Formulate appropriate provisional and alternative diagnoses for key presenting problems and underlying conditions
- Provide immediate management to patients in need of such care
- Perform procedures in a safe and competent manner, including the following where appropriate:
 - Recognizing indications and contraindications
 - Obtaining informed consent
 - Ensuring patient comfort, privacy, and adequate pain control
 - Documentation
 - Post-procedure follow up and handover
- Document patient findings in medical records in a legible and timely manner
- Proactively communicate and liaise with patients and families regarding the patient's condition, management plan, and disposition
- Respect the roles and responsibilities of other healthcare professionals including nurses, pharmacists, and allied health professionals
- Promote prevention and health maintenance, including dietary factors, lifestyle modification, and smoking cessation, during every consultation
- Develop patient-centered care that values individual and family preferences and societal and religious norms

Adult Pulmonology

Duration: 4 weeks

Description

Residents on rotation in pulmonary medicine departments must develop all CanMEDS core competencies while learning the basic skills required for diagnosing and managing a broad range of pulmonary conditions affecting adolescents and adults. Residents should focus on undifferentiated patient problems as well as those that emerge in previously diagnosed patients. Residents should practice progressive responsibility and self-directedness in dealing with patients and their families and be able to act as primary care providers for patients with multiple comorbidities.

Objectives

The goal of this rotation is for residents to gain experience evaluating and managing inpatients with a broad spectrum of pulmonary diseases.

- Describe the epidemiology, genetics, natural history, and clinical expression of pulmonary disorders encountered in both inpatient and outpatient settings

- Demonstrate competence in performing common procedures used in a general medicine service, including paracentesis, and thoracentesis
- Summarize approaches to evaluating common pulmonary disease presentations
- Interpret diagnostic tests used for evaluating inpatients with suspected pulmonary disease
- Critically appraise and cite literature pertinent to evaluating inpatients (or outpatients during the clinic rotation) with pulmonary diseases
- Identify at-risk patients, perform appropriate physical examinations, formulate a problem list, and institute a course of therapy under the direction of senior personnel
- Effectively obtain a comprehensive history and perform a complete physical examination of patients with respiratory symptoms or known pulmonary diseases
- Demonstrate competence in selecting and interpreting laboratory, imaging, and pathologic studies used for appropriately evaluating pulmonary diseases
- Construct a comprehensive treatment plan and assess patient response to therapy
- Demonstrate skill in counseling patients concerning their diagnosis, planned diagnostic testing, and recommended therapies

Adult Cardiology/ Coronary Care

Duration: 4weeks

Description

The cardiology rotation is mandatory for all residents. Residents on rotation in cardiology departments must develop all CanMEDS core competencies while learning the basic skills required for diagnosing and managing a broad range of cardiology conditions affecting adolescents and adults. Residents should focus on undifferentiated patient problems as well as problems that emerge in previously diagnosed patients. Residents should practice progressive responsibility and self-directedness in dealing with patients and their families, including patients with multiple comorbidities.

Objectives

- Describe the seven CanMEDS core competencies and demonstrate the basic skills required for diagnosing and managing a broad range of cardiovascular conditions affecting adolescents and adults
- Describe, relevant basic sciences including pathophysiology, drug therapy, and microbial basis of diseases involving the key presenting problems and disease conditions such as chest pain, shortness of breath, palpitations, and cardiac arrest
- Formulate and manage different chronic cardiac conditions such as chronic heart failure, chronic atrial fibrillation, and chronic valve diseases
- Order appropriate and selective investigations and interpret the findings in the context of the patient's problems such as ECG

Adult Endocrinology and Metabolism

Duration: 4weeks

Description

Residents on rotation in endocrinology and metabolism departments must develop all CanMEDS core competencies while learning the basic skills required for diagnosing and managing a broad range of endocrinology and metabolic conditions affecting adolescents and

adults. Residents should focus on undifferentiated patient problems as well as those that emerge in previously diagnosed patients. Residents should practice progressive responsibility and self-directedness in dealing with patients and their families and be able to act as primary care providers for patients with multiple comorbidities.

Objectives

- Describe the seven CanMEDS core competencies and demonstrate the basic skills required for diagnosing and managing a broad range of endocrinology and metabolic conditions affecting adolescents and adults
- Describe relevant basic sciences including pathophysiology, drug therapy, and the microbial basis of diseases involving the key presenting problems and disease conditions such as diabetes mellitus, hypothyroidism, and other common endocrine diseases.
- Order appropriate and selective investigations and interpret the findings in the context of the patient's problems, especially chronic diseases that requires regular investigations
- Formulate appropriate provisional and alternative diagnoses for key presenting problems and underlying conditions
- Render immediate management to patients who need such care

Adult Neurology

Duration: 4 weeks

Description

The neurology rotation is mandatory for all residents. Residents on rotation in neurology departments must develop all CanMEDS core competencies while learning the basic skills required for diagnosing and managing a broad range of neurological conditions in adults. Residents should focus on undifferentiated patient problems as well as those that emerge in previously diagnosed patients. Residents should practice progressive responsibility and self-directedness in dealing with patients and their families and be able to act as primary care providers for patients with multiple comorbidities.

Objectives

The specific objectives for this rotation are as follows:

- Describe the seven CanMEDS core competencies and demonstrate the basic skills required for diagnosing and managing a broad range of neurological conditions affecting adolescents and adults
- Recognize relevant basic sciences including pathophysiology, drug therapy, and the microbial basis of diseases involving the key presenting problems and disease conditions such as acute stroke, seizure disorder, gait disorders, and peripheral neuropathy
- Order appropriate and selective investigations and interpret the findings in the context of the patient's problems
- Perform a complete health assessment that includes a focused physical examination and an assessment of the patient's mental state
- Formulate appropriate provisional and alternative diagnoses for key presenting problems and underlying conditions
- Render immediate management to patients who need such care
- Perform the lumbar puncture in a safe and competent manner, including the following where appropriate:
 - Recognition of indications and contraindications

- Obtaining informed consent
- Ensuring patient comfort, privacy, and adequate pain control
- Documentation and post-procedure follow up and handover

Intensive Care Unit

Duration: 4 weeks

Description

The critical care medicine rotation is mandatory for all residents. Residents on rotation in critical care medicine departments must develop all CanMEDS core competencies while learning the basic skills required for diagnosing and managing a broad range of critical conditions that affect adolescents and adults and are sufficiently severe to require hospitalization and treatment in a medical intensive care unit. Residents should focus on undifferentiated patient problems as well as those that emerge in previously diagnosed patients. Residents should practice progressive responsibility and self-directedness in dealing with patients and their families and be able to collaborate well with other critical care staff, caring for patients with multiple comorbidities. Critical care medicine deals with life-threatening single or multiple organ failure and is multidisciplinary in its approach. Therefore, the primary physician must be able to coordinate the efforts of subspecialists and a number of specialized ancillary support personnel.

Objectives

On completion of this rotation, the trainee should be able to:

- Describe the natural history and clinical expression of critical care illnesses encountered in the inpatient, ICU, and ER settings
- Define the pathophysiology of commonly observed diseases in critically ill patients
- Formulate a working knowledge of critical care medicine by actively participating in the management of critically ill patients
- Describe the integrative nature of disease in critically ill patients and the interdisciplinary approach to managing such patients
- Identify at-risk patients, perform appropriate physical examinations, formulate a problem list, and institute a course of therapy under the direction of senior personnel
- Prioritize and summarize approaches to evaluating common presentations in critical care medicine patients
- Design interventions that account for clinical urgency, the potential for unexpected outcomes, and available alternatives
- Manage cardiac arrest and acute resuscitation of a traumatized or acutely ill patient
- Effectively obtain a relevant history and perform a pertinent physical examination of critically ill patients
- Competently perform common procedures applied in the medical and surgical ICU, including central and arterial line insertions, orotracheal intubation, paracentesis, thoracentesis, and lumbar puncture
- Select and interpret appropriate laboratory, imaging, and pathologic studies to evaluate critically ill patients
- Construct a comprehensive treatment plan and assess patient response to therapy.
- Effectively interpret diagnostic tests used to evaluate ICU patients, such as arterial blood gases, chest x-rays, and abdominal films
- List indicated interventions for assessment or management
- Obtain and document informed consent from patients and explain the risks, benefits, and rationale for the options discussed

- Counsel patients concerning their diagnosis, planned diagnostic testing, and recommended therapies
- Effectively use validated instruments to assess functioning and quality of life to monitor and adjust therapy
- Establish the roles of the patient and all team members for follow-up investigations of treatment response and consultations and ensure that the agreed-upon follow-up takes place; especially after a change of service such as on-call or patient transfer within the hospital or to an outside facility

General Pediatric

Duration: 8 weeks

Description

The general pediatric rotation outlines the core principles of providing good clinical care for pediatric patients. On completion of this rotation, resident will be familiar with the generic competencies that relate to clinical practice in pediatrics, including obtaining a history and examination of the child, effective communication with children and their families, and the principles of prescribing medicines for babies and children. Residents will be expected to take part in local clinical governance processes, including evidence-based practice and audit.

Objectives

Following this rotation, the trainee should be able to:

- Outline the key features of a pediatric history in different age groups.
- Effectively communicate with children and their families to take an age-appropriate history
- Outline the key differences in examining children from different age groups
- Perform an accurate examination of children and babies in appropriate settings
- Document findings in an accurate, logical, and legible medical record
- Safely prescribe medicines according to the child's weight or age
- Perform mathematical calculations required for pediatric drug and fluid prescriptions

Pediatric Neurology and Neurodisability

Duration: 4 weeks

Description

This rotation focuses on caring for infants and children with neurological disorders and neurodisability. On completion of the rotation, residents will be able to assess and initiate management of patients presenting with neurological problems in acute and outpatient settings. They will understand the potentially life-threatening nature of some of these conditions and recognize when it is appropriate to ask for help. Residents will work with multidisciplinary teams and adopt a holistic approach to the child with complex neurodisabilities.

Objectives

Following this rotation, the trainee will be able to:

- Assess a child presenting with a suspected neurological disorder
- Examine the nervous system of child and young person
- Formulate a plan to establish the diagnosis and consider differential diagnoses
- Recognize factors that represent underlying or serious pathologies
- Initiate appropriate management, including relevant investigations and treatment

- Recognize common causes of seizures and epileptic syndromes, and the principles of anticonvulsant therapy
- Recognize the common causes of disability, the impact disability can have on the child and their family, and what services are available to support them

Pediatric Intensive Care

Duration: 4 weeks

Description

The pediatric intensive care rotation focuses on infants and children who require intensive care. On completion of the rotation, residents will have the knowledge and skills to recognize, assess, and manage an acutely deteriorating child applying a multi-system approach, and will understand the principles of stabilization and transport of the sick child.

Objectives

Following this rotation, the trainee will be able to:

- Use early warning charts while recognizing their limitations
- Identify and manage a deteriorating child and seek the appropriate help in a timely manner
- Describe the basic principles of ventilation, fluid, nutritional, and neuroprotective support in intensive care
- Prepare for and initiate safe patient transport, including appropriate handover

Emergency Medicine

Duration: 6 weeks

Description

The emergency medicine rotation is mandatory for all residents. Residents on rotation in emergency departments must develop all CanMEDS core competencies while learning the basic skills required for diagnosing and managing a broad range of emergency conditions affecting adolescents and adults that are unique to emergency medicine, but relevant to the home health care physician's subsequent practice. Initial evaluation and management of patients with minor injuries and problems related to other specialties closely related to HHC, such as gynecology, is practically useful. Residents should practice progressive responsibility and self-directedness in dealing with patients, including those with multiple comorbidities, and their families.

Objectives

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

- Shock (hypovolemic, cardiogenic, distributive, and obstructive)
- Myocardial infarction and its complications
- Cardiac arrhythmia, conduction disturbances, and indications for pacemakers
- Pulmonary embolism
- Pulmonary edema (cardiogenic and non-cardiogenic)
- Acute aortic and peripheral vascular disorders, including arteriovenous fistulae (optional)
- Acute complications of cardiomyopathies and myocarditis
- Thrombolytic therapy
- Recognition, evaluation, and management of hypertensive emergencies

- Acute respiratory failure, including acute respiratory distress syndrome (ARDS), hypercapnic and hypoxemic
- Status asthmaticus
- Aspiration and chemical pneumonitis
- Bronchopulmonary infections
- Upper airway obstructions
- Oxygen therapy
- Airway maintenance
 - Emergency airway management
 - Endotracheal intubation
 - Tracheostomy
 - Long-term intubations versus tracheostomy
- Renal regulation of fluid balance and electrolytes and acute acid-base disorders and their management
- Renal failure (prerenal, renal, and postrenal)
- Interpret urine electrolytes
- Evaluate oliguria
- Drug dosing in renal failure
- Coma
- Psychiatric emergencies
- Managing persistent vegetative states
- Antimicrobial agents (aminoglycosides, antifungal agents, antituberculosis agents, penicillin and other antibiotics, antiviral agents, agents for parasitic infections)
- Infection control for special care units
- Systemic sepsis
- Hospital-acquired and opportunistic infections in critically ill patients
- Adverse reactions to antimicrobial agents
- Infectious risks to health care workers
- Acute defects in hemostasis (thrombocytopenia, disseminated intravascular coagulation, primary fibrinolytic therapy)
- Anticoagulation and fibrinolytic therapy
- Sickle cell crisis
- Acute pancreatitis with shock
- GI bleeding
- Hepatic failure
- Toxic megacolon
- Obstructive uropathy and acute urinary retention
- Urinary tract bleeding
- Stress ulcer prophylaxis
- Drug dosing in hepatic failure
- Initial approaches to trauma management

Procedural Skills

The resident must be proficient in the following procedural skills and understand the indications, contraindications, complications, and pitfalls of these interventions:

Airway Management:

- Open airway maintenance in non-intubated, unconscious, paralyzed patients
- Intubation (oral and nasotracheal)
- Cricothyrotomy, transtracheal catheterization, and tracheostomy

Breathing and Ventilation

- Ventilation of bag and mask
- 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
- Airway pressure release ventilation
- Suction techniques
- Chest physiotherapy and incentive spirometry (optional)
- Management of pneumothorax (needle and chest tube insertion drainage systems)
- Monitoring of airway pressures
- Interpretation of sputum cultures by smear
- Performance of bedside pulmonary functions tests
- Application of appropriate oxygen therapy

Circulation

- Arterial puncture and blood sampling
- Insertion of monitoring lines
- 12-lead ECGs.
- Dynamic ECG interpretation
- Cardioversion

GI Tract

- Insertion of transesophageal devices
- Preventing and managing upper GI bleeding

Hematology

- Proper ordering and interpretation of coagulation studies
- Sterility techniques and precautions
- Sampling, staining, and interpreting blood, sputum, urine, drainage, and other body fluids
- Interpretation of antibiotic levels and sensitivities

Tube feeding

- Parental nutrition
- Monitoring and assessing metabolism and nutrition
- Maintaining temperature homeostasis
- Metabolism and nutrition

Mental Health

Duration: 4 weeks

Description

The mental health rotation is mandatory and is a core rotation for all residents. Residents on rotation in mental health must develop all CanMEDS core competencies while learning the basic skills required for diagnosing and managing a broad range of mental conditions. Through their training with inpatients and outpatients and patients in emergency departments or mental health institutes.

Objectives

On completion of this rotation, the trainee should be to:

- Identify illness presentation, illness experience, appropriate assessment, and managing the range of psychiatric illnesses encountered in inpatient settings, including affective disorders, psychotic disorders, and eating disorders
- Demonstrate knowledge of body and central nervous system anatomy and function necessary to understand the pathophysiology and psychopharmacology of the range of illnesses encountered in this setting
- Identify normal and abnormal psychological and neurophysiological development throughout the lifespan as it affects patients through presentation and experience of psychiatric illnesses
- Make a comprehensive diagnosis using the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM-V), particularly the diagnostic criteria for the major psychiatric syndromes, including schizophrenia, bipolar I and II disorders, major depression, anxiety disorders, and personality disorders
- Recognize the natural course of psychiatric illness in the adult population
- Demonstrate effective interviewing skills to facilitate professional relationships and therapeutic alliances with psychiatrically ill patients and their families
- Implement effective history and physical examination skills, including contact date and time, patient profile, history of present illness, past history, developmental history, medical history, mental status, and appropriate physical examination
- Correlate, evaluate, prioritize, and synthesize assessment information in a biopsychosocially oriented problem formulation. This would include the following:
 - Select appropriate applied knowledge via critical appraisal of the literature
 - Formulate a reasonable problem-oriented management plan
 - Generate a rational plan for diagnostic and therapeutic measures and communicate it to the patient and his or her family
 - Interact and collaborate with other mental health care professionals for patient management
 - Evaluate and modify diagnosis and management plans appropriately via periodic assessment of patients' responses
 - Maintain proper medical records
 - Assess the quality of care in the provision of mental health care
 - Demonstrate appropriate consultation skills in collaborative communication and interaction with other health care professionals involved in the patient's care
 - Recognize personal limitations that may interfere or limit patient care; know when to ask for help or cease work and return home
 - Perform thorough mental status assessments, limited neuropsychological assessments, and ECT; gain intravenous access; and draw blood
 - Demonstrate the knowledge and skills required to apply the provincial Mental Health Act
 - Be trustworthy and honest with patients
 - Recognize personal limitations and be willing to call on others with special expertise when necessary
 - Demonstrate an appreciation of the moral and ethical implications of various treatments and research as they relate to patient care

Palliative Care

Duration: 4 weeks

Description

The palliative care rotation is mandatory for all residents. Residents on rotation in palliative care must develop all CanMEDS core competencies while learning the basic skills required for the management of a broad range of conditions that are unique to palliative care but relevant to home health care physician's subsequent practice.

Objectives

On completion of this rotation, the trainee should be able to:

- Describe current societal attitudes about death and dying
- Define palliative care and describe its basic principles
- Competently obtain a palliative care history and perform a complete and appropriate physical examination
- Identify issues in death and dying relevant to different cultures, spiritual beliefs, and traditions
- Define the physical, psychological, and social issues of dying patients and their families
- Demonstrate basic knowledge of pain assessment and classification, the neurophysiology of pain, the pharmacology of drugs used in pain and symptom management, and the pathophysiology of other symptoms
- Appropriately manage other physical symptoms, particularly dyspnea, constipation, skin care, mouth care, terminal agitation, delirium, nausea, vomiting, and other common symptoms
- Identify psychological issues associated with life-threatening illness and strategies that may be useful in addressing them
- Assess and manage issues related to cachexia, nutrition, and feeding at the end of life
- Describe the process of normal grief and the features of atypical grief
- Seek appropriate consultations from other health care professionals, recognizing the limits of their expertise in areas outside their special interest

Rehabilitation

Duration: 4 weeks

Description

During a rehabilitation rotation, residents will be exposed to the multitude of conditions seen and evaluated in a rehabilitation setting and will learn the principles of rehabilitation for patients with chronic and/or debilitating medical disorders.

Objectives

By the end of the rotation the trainee will be able to:

Knowledge

- Describe the relevant etiology, pathophysiology, and presentation of:
 - Neurological disorders
 - Multiple sclerosis
 - Parkinson's
 - Guillian Barre (AIDP)

- Chronic inflammatory demyelinating polyneuropathy (CIDP)
- Peripheral neuropathies
- Musculoskeletal disorders
 - Arthritides
 - Multiple traumas
- Generalized conditions
 - Deconditioning
 - Burns
 - Cancers
- Describe the classification and diagnosis of the above disorders
- Describe the pharmacological and non-pharmacological management principles of the above disorders
- Appraise the use of medications in the treatment of the above disorders and select/prescribe appropriate drug therapy
- Select, justify, and interpret appropriate investigations including lab tests, radiological workup, electrodiagnostic, and psychometric tests
- Identify and prevent common complications such as depression, infections, venous thrombosis, contractures, and chronic pain
- Identify the roles of physical modalities and assess their appropriate application to the individual patient
- Identify, assess, and select appropriate use of orthoses and mobility aids
- Identify and manage relevant medicolegal issues

Skills

- Perform a competent physical and functional examination of the patient with particular emphasis on the neuromusculoskeletal systems
- Perform a functional independence measure (FIM) assessment on the patient
- Order relevant investigations and appropriately interpret the results, including blood work, body fluid analysis, and imaging tests
- Formulate an appropriate rehabilitation plan based on realistic goals for the individual patient
- Perform diagnostic and therapeutic procedures as required including joint aspiration and joint injection

Electives (2 rotations)

The candidate will choose a specialty of his/her interest and set an objective.

- Pain management
- Ophthalmology
- ENT
- Dermatology
- Radiology
- Family medicine
- Others

ASSESSMENT

Residents' evaluation and assessment throughout the program will follow the Saudi Commission's training and examination rules and regulations.

Annual Assessment

Continuous appraisal: These assessments are conducted toward the end of each training rotation throughout the academic year and at the end of each academic year as a continuous means of both formative and summative evaluation.

Continuous Formative Evaluation

To fulfill the CanMEDS competencies based on the end-of-rotation evaluation, the resident's performance will be evaluated jointly by relevant staff members, who will assess the following competencies:

- Trainee's performance during daily work
- Performance and participation in academic activities (see the *Evaluation of the Presenter by Staff Supervisor* form below)
- Performance in 10 to 20 minutes of directly observed trainee–patient interaction. Trainers are encouraged to perform at least one assessment per clinical rotation, preferably near the end of the rotation. Trainers should provide timely and specific feedback to the trainee following each assessment of trainee–patient encounters (*Mini Clinical Evaluation Exercise* [Mini-CEX] and case-based discussions).
- Trainee's performance of diagnostic and therapeutic procedural skills. Timely and specific feedback from trainer to the trainee is mandatory following each procedure using the *Direct Observation of Procedural Skills* (DOPS) form.
- The CanMEDS-based *In-Training Evaluation Report* (ITER) must be completed (preferably in electronic format), with the signatures of at least two consultants, within **two weeks** of the end of each rotation. The program director discusses evaluations with residents as necessary.

Academic and clinical assignments should be documented in an electronic tracking system (**e-Logbook** when applicable) on an annual basis (*Appendix 1*). Evaluations are based on accomplishing the minimum requirements for the procedures and clinical skills, as determined by the program.

Continuous Summative Evaluation

A summative continuous evaluation report is prepared for each resident at the end of each academic year and might also involve clinical or oral examinations, an objective structured practical examination, or an objective structured clinical examination.

Principles End-of-Year Examination

The end-of-year examination will be limited to D1 residents. The exam will be in the form of MCQs only and carried out by the training institutes. Eligibility, and passing score are established in accordance with the commission's training and examination rules and regulations. Examination details and a blueprint are published on the commission website, www.scfhs.org.sa.

Final In-Training Evaluation Report (FITER) and Certification of Training Completion

In addition to the supervising committee's approval of clinical requirements completion (via the resident's logbook), the program directors should prepare a FITER for each resident at the end of the final year (D2). To be eligible to sit for final specialty examinations, each trainee is required to obtain a *Certification of Training-Completion*. Based on the training bylaws and executive policy (please refer to www.scfhs.org) a *Certification of Training-Completion* will be issued and approved by the supervisory committee or its equivalent according to SCFHS policies when the following criteria are fulfilled:

- Successful completion of all training rotations
- Completion of training requirements as outlined by scientific committee of specialty (e.g. logbook, research, others)
- Clearance from SCFHS training affairs to ensure compliance with tuition payments and completion of universal topics

Final Examinations

The final Saudi diploma examination consists of two parts:

Written examination

The written examination assesses the trainee's theoretical knowledge base (including recent advances) and problem-solving capabilities in home health care; it is delivered in MCQ format and held at least once per year. The number of examination items, eligibility, and passing score are established in accordance with the commission's training and examination rules and regulations. Examination details and a blueprint are published on the commission website, www.scfhs.org.sa.

Clinical examination

The clinical examination assesses a broad range of high-level clinical skills including data gathering, patient management, communication, and counseling. The examination is held at least once per year, preferably as an objective structured clinical examination (OSCE) in the form of patient management problems (PMPs). There will be a minimum of 10-12 stations. Eligibility and passing scores are established in accordance with the commission's training and examination rules and regulations. Examination details and a blueprint are published on the commission website, www.scfhs.org.sa.

Written (cognitive) and Clinical (OSCE) are non-compensatory. Residents must pass both examinations.

Certification

Candidates passing all components of the final specialty examination are awarded the "Saudi Diploma of Home Health Care" certificate.

REFERENCES

1. Montauk SL. Home health care. *American Family Physician* 1998;58:1608-1614.
2. Meurer LN, Meurer JR, Holloway R. New models of health care in the home and in the work site. *American Family Physician* 1997;56:384-389.
3. Galloway PL. The important role of physician in home care in Kingdom of Saudi Arabia. *Caring* 1998;17(12):36-8.
4. Soundappan A, Goodwin T, Greengold R, Siegler EL. How to get the most benefit from a changing home health care system. *Geriatrics* 1997;52(10):83-86.
5. Alan J, Adnan Ezzat, Susan Volker. Developing Palliative Care Services for Terminally Ill patients in Saudi Arabia. *Annals of Saudi Medicine*, Vol. 15, No. 4,1995.
6. Gray AJ, Ezzat A, Volker S. Developing palliative care services for terminally ill patients in Saudi Arabia. *Annals of Saudi Medicine* 1995;15(4).
7. Balinsky W. Economic impact of homecare. In: M Rothkopf (ed.) *Standards and Practice of Homecare Therapeutics*. 2nd ed. Baltimore, MD: Williams & Wilkins; 1997:91-106.
8. American Medical Association, Council on Scientific Affairs. Home care in the 1990s. *JAMA* 1990;263:1241-1244.
9. American Medical Association. Home Care Advisory Panel. Guidelines for the medical management of the home-care patient. *Archives of Family Medicine* 1993;2(2):194-206.
10. Scanameo AM, Fillit H. House calls: A practical guide to seeing the patient at home. *Geriatric*. 1995;50:33-39.
11. American Medical Association. Socioeconomic monitoring survey 1990. *Phys Marketplace Update* 1991;2:3.
12. American Medical Association, Council on Scientific Affairs. American Medical Association white paper on elderly health. *Archive of Internal Medicine* 1990;150:2459-2472.
13. AMA Council on Scientific Affairs. Educating physicians in home health care. *JAMA* 1991;265:769-771.
14. Varricchio C. Human and indirect costs of home care. *Nursing Outlook* 1994;42:151-7.
15. Levine SA, Boal J, Boling PA. Home care. *JAMA* 2003;290:1203-1207.

APPENDICES

APPENDIX 1 / logbook

Logbook Objectives

The objectives of the logbook or (T-Res) system are as follows:

- Maintain records and document all academic activities (e.g., procedures, lectures, journal clubs, meetings, training courses, workshops, symposia, and case presentations) undertaken during the training program
- Assist the resident in identifying his or her deficiencies in specific areas
- Assist the program director/evaluator in documenting the contribution and evaluation of trainees
- Provide the evaluator with guidance regarding appropriate and fair assessment of trainees
- Provide the program director with guidance regarding deficiencies in training

Guidelines for Residents

- Residents are required to maintain logbooks during the entire training period
- Logbook entries concerning recorded activities should be completed on the day on which activities occur
- All entries must be signed by a mentor within one week
- Residents should discuss their training progress, as indicated in the logbook, with the mentor and/or program director every month
- Residents should submit their completed logbooks to the program director at the end of rotations and training, for subsequent submission to the regional supervisory committee
- If a logbook is not signed by the program director, the resident will be ineligible for end-of-training certification and final examination.

APPENDIX 2 / Evaluation forms

END OF ROTATION EVALUATION FORM

Center:

Residency level:

Name: _____ Registration number: _____

Rotation: _____ Period: _____

		Clear failure (1)	Borderline (2)	Clear Pass (3)	Exceeds expectations (4)	Not applicable
A. Medical Expert						
<i>Basic and clinical knowledge</i>						
1.	Understands the basic and clinical science and pathophysiology of common medical illnesses					
2.	Understands the clinical presentation, natural history, and prognosis of common medical illnesses					
3.	Demonstrates expertise in all aspects of diagnosing and managing common medical illnesses					
4.	Practices contemporary, evidence-based, and cost-effective medicine					
5.	Avoids unnecessary or harmful investigations or management					
6.	Provides care to diverse communities					
7.	Demonstrates appropriate knowledge, skills, and attitudes regarding gender, culture, and ethnicity issues					

8.	Completes accurate histories and physical examinations					
9.	Formulates appropriate differential diagnoses					
10.	Develops an appropriate plan of investigation and interprets the results					
11.	Develops a therapeutic plan					
12.	Develops a plan of secondary prevention					
13.	Demonstrates appropriate clinical judgment					
14.	Demonstrates knowledge of medications used, mechanisms of action, clinically relevant pharmacokinetics, indications, contraindications, and adverse effects					
Procedural skills						
15.	Understands the indications, contraindications, and complications of specific procedures					
16.	Demonstrates mastery of specific procedure techniques					
B. Communicator						
17.	Records appropriate progress notes and transfer and discharge summaries					
18.	Communicates with junior medical, nursing, and allied health staff in an appropriate manner					

19.	Communicates with patients in an appropriate manner					
20.	Appropriates communication with patients' families					
21.	Establishes therapeutic relationships with patients and their families					
22.	Delivers understandable information to patients and their families					
23.	Provides effective counseling to patients and their families					
24.	Maintains professional relationships with other healthcare providers					
25.	Provides clear and complete records, reports, and informed and written consent					
	C. Collaborator					
26.	Works effectively in a team environment					
27.	Is able to work with allied healthcare staff					
28.	Is able to work with nursing staff					
29.	Is able to work with attending and junior medical staff					
30.	Consults with other physicians and healthcare providers effectively					
31.	Participates in activities that contribute to the effectiveness of healthcare organizations and systems					

D. Manager						
32.	Manages his or her practice and career effectively					
33.	Allocates finite healthcare resources appropriately					
34.	Serves in administrative and leadership roles as appropriate					
35.	Uses information technology to optimize patient care, lifelong learning, and other activities					
E. Health Advocate						
36.	Is attentive to preventive measures					
37.	Demonstrates adequate patient education regarding compliance and the role of medication					
38.	Attentive to issues in public health policy					
39.	Recognizes important social, environmental, and biological determinants of health					
40.	Demonstrates concern that patients have access to appropriate support, information, and services					
41.	Offers advocacy on behalf of patients at the practice and general population levels					
42.	Attends and contributes to rounds, seminars, and other learning events					

	F. Scholar					
43.	Discusses present selected topics in an appropriate manner, as requested					
44.	Demonstrates adequate ability to search relevant literature					
45.	Demonstrates efforts to increase knowledge base					
46.	Accepts and acts on constructive feedback					
47.	Reads about patient cases and takes an evidence-based approach to management problems					
48.	Contributes to the education of patients, house staff, students, and other health professionals					
49.	Contributes to the development of new knowledge					
	G. Professional					
50.	Recognizes his or her own limitations and seeks advice and consultation when necessary					
51.	Understands the professional, legal, and ethical obligations of physicians					
52.	Delivers evidence-based care with integrity, honesty, and compassion					
53.	Demonstrates appropriate insight into his or her own strengths and weaknesses					
54.	Shows initiative within the limits of knowledge and training					

55.	Discharges duties and assignments responsibly and in a timely and ethical manner					
56.	Reports facts accurately, including his or her own errors					
57.	Maintains appropriate boundaries in work and learning situations					
58.	Respects diversity in race, age, gender, disability, intelligence, and socioeconomic status					
Total Score		Total score = _____ X 25 = 100% Number of evaluated items = _____				

Program director: _____

Comments:

I certify that I have read all parts of this evaluation report and discussed the report with the evaluators

Resident name: _____ **Signature:** _____

Evaluator name: _____ **Signature:** _____

Evaluator name: _____ **Signature:** _____

Program director: _____ **Signature:** _____

MINI CLINICAL EVALUATION EXERCISE (MINI-CEX)

Evaluator name:
 Assessor position:
 Date:
 Trainee name:
 Registration no.:
 Residency level:

Brief summary of the case

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New:

Follow up:

Assessment setting:

Inpatient:

Ambulatory:

ICU:

CCU:

Emergency department:

Others:

Complexity: Low; Moderate; High

Focus:

Data gathering:

Diagnosis:

Therapy:

Counseling:

Assessment:

SCORE FOR TRAINING STAGE									
Questions	Unsatisfactory			Satisfactory			Superior		
	1	2	3	4	5	6	7	8	9
Taking history									
Physical examination skills									
Communication skills									
Critical judgment									
Humanistic quality/professionalism									

Organization and efficiency									
Overall clinical care									

Mini-CEX time: Observing: min:
 Providing feedback: min
 Evaluator satisfaction with Mini-CEX: Low 1 2 3 4 5 6 7 8 9 High
 Trainee satisfaction with Mini-CEX: Low 1 2 3 4 5 6 7 8 9 High

Trainee:

Evaluator:

Remarks:

Item	Description
Taking history	Facilitates patients telling their stories; uses appropriate questions to effectively obtain accurate, adequate information; responds appropriately to verbal and nonverbal cues
Physical examination skills	Follows an efficient, logical sequence; examinations are appropriate for clinical problems; provides patients with explanations; is sensitive to patients' comfort and modesty
Communication skills	Explores patients' perspectives; jargon free speech; open and honest; empathetic; agrees on management plans and therapies with patients
Critical judgment	Forms appropriate diagnoses and suitable management plans; orders selectively and performs appropriate diagnostic studies; considers risks and benefits
Humanistic quality/professionalism	Shows respect, compassion, and empathy; establishes trust; attends to patient's comfort needs; respects confidentiality; behaves in an ethical manner; is aware of legal framework and his or her own limitations
Organization and efficiency	Prioritizes; is timely and succinct; summarizes
Overall clinical care	Demonstrates global judgment based on the above topics

DIRECT OBSERVATION OF PROCEDURAL SKILLS ASSESSMENT FORM

Trainee's name	Registration no.	
Observation	Registration no.	
Observed by	Date	
Signature of supervising doctor		

Description	Satisfactory	Unsatisfactory	Comment
Understood the indications for the procedure and clinical alternatives			
Explained plans and potential risks to the patient clearly and in an understandable manner			
Good understanding of the theoretical background, including anatomy, physiology, and imaging, of the procedure			
Good advance preparation for the procedure			
Communicated the procedure plan to relevant staff			
Aware of risks of cross infection and demonstrated an effective aseptic technique during the procedure			
Procedure success or failure was understood in the current setting			
Coped well with unexpected problems			
Skillful and handled patient and tissues gently			

Maintained accurate and legible records including descriptions of problems or difficulties			
Issued clear postprocedural instructions to the patient and/or staff			
Sought to work to the highest professional standards at all times			

ASSESSMENT	
Practice was satisfactory	
Practice was unsatisfactory	
Examples of good practice: _____ _____ _____	
Areas of practice requiring improvement: _____ _____ _____	
Further learning and experience should focus on the following:	

RESIDENT PRESENTATION EVALUATION BY STAFF SUPERVISOR

Resident name: _____
 Level: _____
 Staff Supervisor: _____
 Date of Presentation: _____
 Topic: _____

Please use the following scale to evaluate the presentation:

Very weak	Weak	Acceptable	Good	Very good
1	2	3	4	5

	1	2	3	4	5
Medical Expert					
– Demonstrated thorough knowledge of the topic					
– Presented at the appropriate level and with adequate details					
– Comments (optional)					
Communicator					
– Provided objectives and an outline					
– Presentation was clear and organized					
– Used clear, concise, and legible materials					
– Used effective methods and presentation style					
– Established good rapport with the audience					
Collaborator					
– Invited comments from learners and led discussions					
– Worked with staff supervisor effectively in preparing the session					
– Comments (optional)					
Health Advocate					
– Managed time effectively					

– Addressed preventive aspects of care if relevant					
– Comments (optional)					
Scholar					
– Posed appropriate learning questions					
– Accessed and interpreted the relevant literature					
– Comments (optional)					
Professional					
– Maintained patients' confidentiality if clinical material was used					
– Identified and managed relevant conflicts of interest					
– Comments (optional)					

**RESIDENT'S EVALUATION OF THE DIFFERENT COMPONENTS OF
THE CORE CURRICULUM**

Resident name: _____

Level: _____

Staff Supervisor: _____

Date of Session: _____

Name Session: _____

1. How would you evaluate the value of this session?
1 = Very low 2 = Low 3 = Moderate 4 = High 5 = Very high
2. How well did this session meet your educational needs?
1 = Not at all 2 = Slightly 3 = Moderately 4 = Very 5 = Extremely
3. Should this session be continued in the future? Yes No
4. At which level should this session be aimed? _____
5. At which time of the year should this session be conducted? _____
6. Have you had an opportunity to practice this skill? Yes No
7. Do you have any suggestions for how to improve this session?
