

# **KRISHNA INSTITUTE OF MEDICAL SCIENCES,KARAD**

## **GERIATRICS FELLOWSHIP PROGRAM**

### **INTRODUCTION**

The geriatric medicine fellowship is initiated in response to the growing need for academically trained geriatricians in India. The mission of Geriatric Medicine Fellowship is to educate physicians to provide elderly patients with the best possible care using expertise in clinical skills and an excellent fund of knowledge based on current clinical and basic science research. The geriatric medicine fellowship is based in the geriatrics section of the Department of Internal Medicine. The program encompasses acute, ambulatory, community, and long term care experiences.

Krishna Institute Of Medical Sciences has a modern, well-equipped and sophisticated medical intensive care unit (MICU) and coronary care unit (CCU).The intensive care unit has a capacity of 20 beds. There is a Medicine Department which has about 85,000 OPD attendance and 8000 indoor admissions per year. MICU has the capacity to ventilate patients with invasive ventilation and monitoring with support of experienced medical and nursing staff. In addition, there is facility to provide dialysis for renal failure patients. Bio Medical Engineer is available round the clock for the trouble free and smooth functioning of the life support equipment. MICU provides IV fluid administration with infusion pumps and syringe pumps, hence accurate volume delivery is ensured. There are multiple multi channel vital sign monitors, which are capable of measuring blood pressure both invasively and non-invasively with ETCO<sub>2</sub> monitoring facility. Every patient requiring continuous pulse oximetry has its own dedicated pulse oximeter. Cardiac Echo,ECG and EEG services are also available. There is availability of portable x-ray and ultrasonography round the clock and hospital has 24-hour laboratory support for urgent investigations including blood gas analysis. CT and MRI Scan are available in close by facilities.

### **MICU Staff:**

The unit is staffed with well trained and experienced fulltime Consultants. Patients have a chance to interact with one of them on a regular basis. MICU is also staffed with well trained and experienced nurses.

## **PROGRAM OVERVIEW**

### **Competency-based Learning Goals and Objectives for Geriatric Medicine Fellows**

The overall goals and objectives for geriatric medicine fellows are to gain extensive experience

in the diagnosis and ongoing management of elderly patients with multiple medical problems

across a variety of health care settings.

#### **One Year Clinical fellowship**

Goals and objectives have been established for the geriatric medicine fellows. These are primarily aimed at gaining experience in the daily management and provision of continuity care to elderly patients, paying particular attention to their functional status and cognitive ability. In general the expectations of fellows include demonstration of medical knowledge, comprehension of pathophysiology, development of differential diagnoses, formulation of management plans, and dissemination of plan of care by presentations in various clinical settings and at clinical conferences. The care and management of geriatric patients will be specifically addressed in inpatient, ambulatory, house call and long term care settings. The fellows are also active members of interdisciplinary teams and teach internal residents and medical students.

#### **Medical Knowledge**

Proficiency in this competency includes knowledge of biomedical, clinical, and epidemiological domains. Individual fellows will be taught and evaluated based on their ability to acquire and access new knowledge, interpretation of information and then how to apply this information to clinical settings specifically the individual patient.

- Knowledge of Geriatric Medicine, including but not limited to cognitive impairment, depression, falls, incontinence, osteoporosis, sensory impairment, pressure ulcers, sleep disorders, pain, elder abuse/neglect, malnutrition, polypharmacy, health maintenance, and functional impairment.
- Knowledge of diseases that are particularly prevalent in older patients and may have different clinical presentations including but not limited to neoplastic, cardiovascular, neurologic, musculoskeletal, metabolic, infectious diseases.
- Knowledge of pharmacologic issues and aging, including polypharmacy, side effects, drug interactions, adherence, costs, and changes in pharmacokinetics and

pharmacodynamics in older patients

Knowledge of geriatric principles of rehabilitation, the optimal use of physical occupational, and speech therapy, exercise, functional activities, assisted devices, environmental modification and various intensities of rehabilitation.

Knowledge of perioperative assessment and management.

Knowledge of the pivotal role of formal and informal caregivers, families and the formal

community support systems available.

Knowledge of long term care, including palliative care, knowledge of the administration,

regulation and financing of long-term institutions and the continuum of safe and timely transitions across care settings.

Knowledge of home care, including components of home visits, and appropriate community services

Knowledge of hospice including pain management, symptom relief, comfort care and end-of-life decisions

Knowledge of cultural aspects of aging, including demographics, health care status, diverse ethnicities, access to health care

Knowledge of iatrogenic disorders and their prevention

### **Interpersonal and Communication Skills**

Fellows are expected to

Communicate effectively with patients, families and the public from diverse socioeconomic

and cultural backgrounds

Communicate effectively with physicians, interdisciplinary team members and health related agencies

Work effectively as a member or a leader of a health care team

Act in a consultative role to other physicians and health professionals

### **Practice-based Learning and Improvement**

Fellows are expected to

Identify strengths, deficiencies, and limits of personal knowledge and expertise

Set learning and improvement goals

Identify and perform appropriate learning activities

Systematically analyze practice using quality improvement methods, and implement

changes with the goal of practice improvement

- Incorporate formative evaluation feedback into daily practice
- Locate, appraise, and assimilate evidence from scientific studies related to patients' health concerns
- Use information technology to optimize learning
- Participate in the education of patients, families, students, residents and other health professionals.

### **Academic activities**

#### **Courses handled**

Fellowship program in Geriatrics

#### **Intake**

Fellow Geriatrics - 2 per year

#### **Eligibility**

Should have acquired MBBS Degree from a M.C.I. recognized University.

#### **Course duration**

1 years

#### **Selection procedure**

Through Entrance Examinations and Counseling

#### **Academic Curriculum**

- 3 Months-Internal Medicine
- 3 Months-Specialty
- 6 Months-Geriatric Medicines

Topics covered may include general internal medicine as encountered in the practice of Geriatric Medicine.

The content areas are as follows:

- Gerontology
- Diseases in the Elderly
- Geriatric Psychiatry
- Geriatric Syndromes
- Geropharmacology
- Functional Assessment and Rehabilitation
- Caring for the Elderly

### **Gerontology**

Biology

Physiology

Demography and epidemiology

Psychology/sociology of aging

Other

### **Diseases in the Elderly**

#### **Allergy**

Anaphylaxis

Allergic rhinitis

Ocular

Other

#### **Cardiovascular**

Rhythm disturbances

Heart Failure

Cor pulmonale

Pericardial diseases

Atherosclerosis

Hypertension

Orthostatic hypotension

Peripheral vascular disease

Syncope

Other

## **Dermatology**

Environmental etiology

Infections

Seborrheic Dermatitis

Psoriasis

Blistering Diseases

Pruritus

Benign skin tumors

Acne Rosacea

Onychomycosis

Other

## **Endocrinology**

Diabetes

The Metabolic Syndrome

Adrenal disorders

Thyroid disorders

Disorders of calcium metabolism

Osteomalacia

Other

## **Gastroenterology**

Esophagus

UGI bleed

Stomach and duodenum

Liver

Biliary disease

Pancreas

Inflammatory bowel disease

Sprue

Lower GI bleed

Colonic disease

Other

## **Genitourinary**

Male genitourinary disorders

Gynecology

## **Hematology**

Decreased blood cell counts  
Chronic disease  
Erythropoietin deficiency  
B12 deficiency  
Folate deficiency  
Hemolytic  
Hemoglobinopathies  
Myelodysplastic syndromes  
Other

## **Infectious Diseases**

Atypical presentations  
Fever of unknown origin  
Respiratory infections  
Genitourinary  
Syphilis  
HIV  
Intrabdominal  
Neurologic  
Bones and joints  
Tetanus  
Bacteremia/Sepsis  
Drug-resistant/emergent infections  
Other

## **Nephrology**

Hyponatremia  
Hypernatremia  
Acute renal failure  
Chronic kidney disease  
Glomerular disorders  
Renovascular disease  
Tubulointerstitial nephritis  
Acid-base disorders  
Other

## **Neurology**

Stroke and Transient Ischemic Attack

Seizures

Movement disorders

Muscle disorders

Neuropathies

Headaches

Aphasias

Myelopathies

Motor neuron disorders

Other

## **Oncology**

Paraneoplastic syndromes

Specific tumors (prevalence, diagnosis, treatment, complications)

General treatment

## **Oral Health**

Dental caries

Periodontal diseases

Candidiasis

Xerostomia

Salivary glands

Temporomandibular joint

Leukoplakia

Dentures

Nutritional deficiencies and oral health

Other

## **Pulmonary Disease**

Asthma and bronchospasm

Chronic obstructive pulmonary disease

Interstitial lung diseases

Primary pulmonary hypertension

Pulmonary thromboembolism

Pleural diseases



Adult respiratory distress syndrome

Acute respiratory failure

Other

### **Rheumatology**

Osteoarthritis

Osteoporosis

Musculoskeletal conditions (epidemiology, diagnosis, nonpharmacologic, pharmacologic management)

Crystal deposition disease

Polymyalgia Rheumatica and giant cell arteritis

Rheumatoid arthritis

Sjögren's syndrome

Systemic lupus erythematosus

Dermatomyositis and polymyositis

Amyloidosis

Paget's disease

Vasculitis

Lyme disease

Scleroderma

Other

### **Geriatric Psychiatry**

Dementia

Depression

Bipolar disorder

Anxiety

Schizophrenia, psychosis, hallucinations

Alcohol and substance abuse

Personality disorders and hypochondriasis

### **Geriatric Syndromes**

Delirium

Dizziness / lightheadedness

Falls and gait disorders

Sensory loss

Ophthalmology other than vision loss

ENT other than hearing loss

Incontinence

Consequences of immobility

Sleep disorders

Pain

Malnutrition

Frailty

### **Geropharmacology**

Age-related changes

Adverse Drug Events (ADE)

Prescribing principles

Drug Interactions

Complementary and alternative medications

### **Functional Assessment and Rehabilitation**

Conceptual models of disablement

Assessment of disability

Assessment of rehabilitation potential

Aspects of rehabilitation

Interdisciplinary team

Assistive devices

Adaptive equipment

Therapeutic modalities

Orthotics

Prosthetics

Environmental modifications

Rehabilitation settings

Insurance issues

Rehabilitation of common conditions

### **Caring for the Elderly**

Preventive medicine

Economic aspects of health care

Healthcare delivery systems

Ethical principles of care

Caregiver and family concerns

Cultural aspects of aging

End-of-life and palliative-care

Elder mistreatment

**Reference books :**

Sr no.	NAME OF BOOK	AUTHOR
1.	Geriatric Medicine	Christine K. Cassel
2.	Fundamentals of Geriatric Medicine: A Case-Based Approach	Helen Fernandez
3.	Essentials of Clinical Geriatrics: Sixth Edition	Robert Kane, Joseph Ouslander
4.	Oxford American Handbook of Geriatric Medicine (Oxford American Handbooks)	Samuel Durso
5.	Lexi-Comp's Geriatric Dosage Handbook: Including Clinical Recommendations and Monitoring Guidelines	Todd P. Semla
6.	Primary Care Geriatrics: A Case-Based Approach	Richard J. Ham
7.	Evidence-Based Geriatric Nursing Protocols for Best Practice: Third Edition (Springer Series on Geriatric Nursing)	Elizabeth Capezuti, DeAnne Zwicker
8.	Hazzard's Geriatric Medicine & Gerontology, Sixth Edition (Principles of Geriatric Medicine & Gerontology)	Jeffrey Halter, Joseph Ouslander, Mary Tinetti and Stephanie Studenski
9.	Principles of Geriatric Medicine and Gerontology	William Hazzard, John Blass, Jeffrey Halter
10.	Current Geriatric Diagnosis and Treatment (LANGE CURRENT Series)	C. Landefeld, Robert Palmer, Mary Anne Johnson and Catherine Johnston
11.	Harrison's Principles of Internal Medicine, 17th Edition	Anthony S. Fauci, Eugene Braunwald, Dennis L. Kasper
12.	Oxford Textbook of Medicine (Warrell, Oxford Textbook of Medicine)(3-Volume Set)	David A. Warrell, Timothy M. Cox and John D. Firth
13.	Goldman's Cecil Medicine	Lee Goldman , Andrew I. Schafer

## **University Examination details**

The exam is designed to evaluate the extent of the candidate's knowledge and clinical judgment in the areas in which a Geriatrician should demonstrate a high level of competence. Expertise in the broad domain of Geriatric Medicine and the diagnosis and treatment of both common and rare conditions that have important consequences for patients, will be assessed.

### **Theory Examination**

The students sit for the university examination at the end of year and write 3 papers followed by a clinical and viva voce examination as per regulations of the Medical Council of India.

Paper 1 - Internal medicine, including Geriatric Psychiatry

Paper 2 -Geriatric medicine

Paper 3 -Geriatric Medicine, Rehabilitation, Recent advances

### **Practical Examination**

(a) Clinical Patient presentation/discussion:

(i) One long case: The long case will be structured comprising – history taking, clinical examination, investigations, decision making, proposed treatment modalities, ethical justification and personal attributes.

(ii) Two short cases: The short cases will also be structured in which only one particular system may be considered and therapy decision/discussion, made.

(b) Identification of Surgical Pathology, excised specimens & discussion, reading X-rays & CT Scan/MRI, identification of Instruments & discussion, identification of braces & calipers & discussion thereon.

(c) Log book Evaluation.

