

# **THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY**

**69, ANNA SALAI, GUINDY, CHENNAI - 600 032.**



**SYLLABUS  
FOR**

**(Post Doctoral Fellowship under Allied Health Science)**

**POST DOCTORAL FELLOWSHIP IN HYPERTENSION**

**ACADEMIC YEAR 2026 - 2027**



**THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY, CHENNAI**  
**SYLLABUS – POST DOCTORAL FELLOWSHIP IN HYPERTENSION**

**Addressing the Silent Killer: The Urgent Need for Hypertension Specialization in India**

Today, on World Hypertension Day, it is crucial to shine a spotlight on a pressing health crisis affecting millions in India. Hypertension, or high blood pressure, is a silent killer, often unnoticed until it leads to severe complications like heart attacks, strokes, or kidney disease. Shockingly, more than 300 million people in India suffer from hypertension, with nearly 100 million on the cusp of high normal blood pressure, posing a grave threat to public health.

The impact of hypertension in India is staggering, with its prevalence, morbidity, and mortality rates nearly three times higher than diabetes. Despite its widespread prevalence, there exists a glaring gap in specialized training and research in hypertension. Unlike diabetes, which has well-established fellowships and academic programs, hypertension lacks dedicated post-doctoral fellowships in any university or academic institution in India.

The absence of specialized training programs for hypertension specialists is a critical impediment in effectively managing this health crisis. Hypertension requires a nuanced approach in diagnosis, treatment, and management, which can only be achieved through specialized training and continuous research.

To address this gap, there is an urgent need to introduce post-doctoral fellowships in hypertension in academic institutions across India. These fellowships should focus on equipping doctors with advanced skills in diagnosing, treating, and managing hypertension, along with conducting research to better understand the disease's complexities.

Creating awareness among doctors, sensitizing healthcare workers, and engaging with the government are crucial steps in addressing the hypertension epidemic. Medical associations and institutions must collaborate to raise awareness about the importance of specialized training in hypertension and advocate for the inclusion of hypertension fellowships in medical education curricula.

Furthermore, the government plays a pivotal role in addressing this health crisis by allocating resources and funding for hypertension research and training programs. Public-private partnerships can also play a significant role in expanding access to specialized hypertension care in underserved regions.

## **Proposal to Initiate a Postdoctoral Fellowship Course in Hypertension**

### **Introduction:**

Hypertension, often referred to as the "silent killer," is a significant public health issue in India. Despite its high prevalence and severe complications, there is a notable deficiency in specialized training programs for hypertension management. This proposal outlines the need for a postdoctoral fellowship in Hypertension Management, aimed at equipping physicians with the expertise required to combat this growing epidemic effectively.

### **Rationale:**

The prevalence, morbidity, and mortality associated with hypertension in India are alarmingly high, significantly exceeding those related to diabetes. However, the number of specialists trained to manage hypertension remains insufficient. To address this critical gap, it is imperative to develop a specialized training program that focuses on comprehensive hypertension management.

## **Proposal for Hypertension Fellowship Course**

### **1. Course Duration:**

- One-year postdoctoral fellowship.

### **2. Eligibility:**

**M.D. / M.S. in any Speciality.**

**3. Curriculum Highlights:**

- **Comprehensive understanding of hypertension pathophysiology:** In-depth study of the mechanisms leading to hypertension.
- **Advanced diagnostic techniques:** Training in the latest diagnostic tools and methods.
- **Pharmacological and non-pharmacological management strategies:** Education on medication, lifestyle changes, and alternative therapies.
- **Management of hypertensive emergencies:** Protocols and best practices for acute situations.
- **Patient education and lifestyle modification counseling:** Skills to guide patients in managing their condition.
- **Research methodologies in hypertension:** Training in conducting and analyzing hypertension research.
- **Practical training through rotations in cardiology and nephrology departments:** Hands-on experience in related fields.

**4. Objectives:**

- **To produce skilled hypertension specialists:** Develop expertise in managing and treating hypertension.
- **To enhance the quality of hypertension care:** Improve patient outcomes through specialized knowledge and practices.
- **To reduce hypertension-related morbidity and mortality:** Address the public health crisis effectively.

**Implementation and Development**

The course will be developed with input from leading cardiologists, nephrologists, and hypertension specialists. A robust curriculum will be designed to cover all aspects of hypertension management, incorporating both theoretical knowledge and practical training. Partnerships with hospitals and research institutions will be established to provide comprehensive training and research opportunities.

### **Next Steps:**

- Form a committee of experts to develop the detailed curriculum.
- Identify potential academic institutions and hospitals for collaboration.
- Seek approval and accreditation from relevant medical boards and authorities.
- Initiate a pilot program to evaluate and refine the fellowship structure.

### **Call to Action**

This initiative requires the support and collaboration of medical institutions, healthcare professionals, and government bodies. Together, we can establish a program that not only addresses the current healthcare needs but also paves the way for a healthier future.

### **Additional Points**

- The health and economic burden due to hypertension is very high in India. The prevalence, morbidity, and mortality are nearly three times more than diabetes but, unfortunately, we don't have enough hypertension specialists.
- We have more diabetologists all over the country. There is a huge need and demand for Hypertension specialists.
- We request you to kindly start a postdoctoral Fellowship course after MD general medicine.

Kindly initiate and start a one-year Hypertension Fellowship course. In this connection, I will be happy to provide you with the details and curriculum if necessary.

### **Detailed Curriculum Modules**

#### **Module 1:**

- Epidemiology of Hypertension in India,
- Aetio pathogenesis,
- Classification of Hypertension,
- History & Guidelines.

### **Module 2:**

- Measurement of BP, Mercury , Digital, Aneroid, HBPM,OBPM,ABPM
- Clinical Examination including Endocrine evaluation,
- Laboratory Investigations.

### **Module 3:**

- White Coat and Masked Hypertension.
- Home (self) Monitoring of BP.
- Posture And BP & Risk Scoring .
- Ambulatory, Nocturnal Monitoring of BP & BP Variability.

### **Module 4:**

- ECG in Hypertension.
- ECHO in Hypertension.
- Other Imaging Studies in Hypertension including Renal Imaging /ECG.

### **Module 5:**

- Life style Modifications , YOGA & Mindfulness.
- Diet and Hypertension.
- Salt and Hypertension.
- Exercise and Hypertension.

### **Module 6:**

- Classification of Antihypertensives,
- Initial Therapy in Hypertension,
- Combination Therapy in Hypertension,
- Compelling Indications in Hypertension,
- Side Effects and Contraindications of Anti hypertensives.

### **Module 7:**

- Difficult to Control Hypertension,
- Resistant Hypertension ,

- Secondary Hypertension.
- Acute Severe Hypertension ( Emergencies)

### **Module 8:**

- Hypertension & HEART,
- Hypertension & BRAIN ,
- Hypertension & KIDNEYS ,
- Hypertension & EYES,
- Hypertension & PAD ,
- Hypertension & AORTA .

### **Module 9:**

- Hypertension in DIABETES,
- Hypertension in OBESITY ,
- Hypertension in OSA,
- Hypertension in CAD ,
- hypertension in HEART FAILURE ,
- Hypertension in ATRIAL FIBRILLATION ,
- Hypertension in CONNECTIVE TISSUE DISORDERS.

### **Module 10:**

- Hypertension in Elderly,
- Hypertension in CHILDREN ,
- hypertension in ADOLESCENCE ,
- Hypertension in PREGNANCY ,
- Hypertension in WOMEN &
- Hypertension in PERIOPERATIVE Period.

### **Module 11:**

- Drugs & Hypertension ,
- Sleep & Hypertension,
- Pollution & Hypertension,
- Government Programs on Hypertension ,
- Counseling & Hypertension.

### **Module 12:**

- Devices and Interventional Therapy in Hypertension.

- Important Trials in Hypertension.
- Recent Advances and Future of Hypertension Management.

### **Patient Education and Lifestyle Modification Counseling:**

- Skills to guide patients in managing their condition.

### **Research Methodologies in Hypertension:**

- Training in conducting and analyzing hypertension Research.

### **Practical Training:**

- Through rotations in general medicine, cardiology, nephrology and endocrinology departments for Hands-on experience in related fields.

**Conclusion:** In conclusion, hypertension is a growing health concern in India that demands immediate attention. Introducing post-doctoral fellowships in hypertension, creating Hypertension specialists. The proposed postdoctoral fellowship in Hypertension Management is a crucial step towards addressing the significant healthcare gap in India. By training more specialists, we can improve the diagnosis, treatment, and management of hypertension, ultimately reducing its burden on the healthcare system and improving patient outcomes.

Nowhere in India such fellowship courses are available .It is high time Dr MGR Medical University can start hypertension fellowship course and be a role model to the rest of the universities and medical institutions in India.

It is time to prioritize hypertension training and research to ensure a healthier future for millions of Indians.

**ROTATIONAL SPECIALITY POSTINGS---EACH 15 DAYS**

**PARENT DEPARTMENT ---GENERAL MEDICINE**

CARDIOLOGY INCLUDING ICU

NEPHROLOGY INCLUDING DIALYSIS

PAEDIATRICS

OBSTETRICS & GYNAECOLOGY

ENDOCRINOLOGY

GERIATRIC MEDICINE

IMCW / RADIOLOGY

NEUROLOGY

COMMUNITY MEDICINE -TO CREATE PUBLIC HEALTH AWARENESS  
PROGRAM