

Dr. Rajeev Gupta

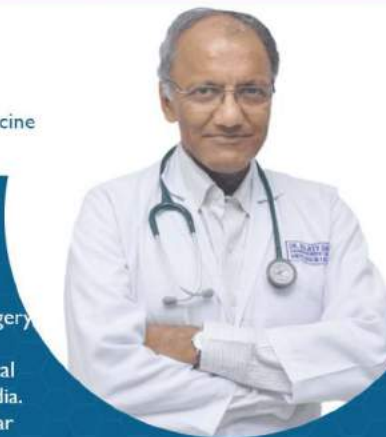
MBBS, MD(PGI), PhD, FRCP(London), FACC, FESC

Dr Rajeev Gupta is Chair, Preventive Cardiology and Medicine, Eternal Heart Care Centre & Research Institute, Mount Sinai New York Affiliate, Jaipur; Honorary Professor (Medicine), Mahatma Gandhi University of Medical Sciences and Technology, Jaipur; and Distinguished Scientist, Birla Institute of Scientific Research, Jaipur. He is a member of Project Approval Committees for the Indian Council of Medical Research (ICMR) and was a Board Member of the World Heart Federation, Geneva. He is the current president the of Indian Society of Hypertension, and Convenor-Prevention Council, Cardiological Society of India (CSI).

He is a pioneer in cardiovascular epidemiology in India, member of steering committee of major epidemiological studies such as PURE, INSPIRE, MDS, CREATE, IHW and JHW, and international collaborator for GBD and NCDRisC studies. He has more than 1100 scientific publications, with ≈700 original articles and reviews in peer-reviewed journals including the *Lancet*, *New England Journal of Medicine*, *Nature*, *JAMA*, *JACC* and *BMJ*, 125 book chapters and 5 books. He has more than 160,000 citations at Google Scholar and 115,000 citations at PubMed. He has been an invited speaker at conferences of European Society of Cardiology, American College of Cardiology, World Heart Federation, International Society of Hypertension, European Society of Hypertension, and International Diabetes Federation. He received CSI-DP Basu Award in 1994, ICMR-Chaturvedi Memorial Award in 1995, CSI-VV Shah NSPHERE Oration in 2000, Lancet-ESC Lecture in 2019, and CSI-Umarani Banerjee Oration in 2022. He has presented invited lectures at Oxford University (UK) and Mount Sinai Hospital (New York). He has been consistently among the top 1% of global scientists and is currently ranked 1st in India and 108th globally in medicine, cardiology, and hypertension research. As a teacher at various medical colleges and institutions, he has mentored hundreds of medical students and guided scores of PhD, MD/DNB (Medicine), MPhil and MSc students at the University of Rajasthan and the National Board of Examinations. He is currently the editor the of *RUHS Journal of Health Sciences*. He participates regularly in public health-education programs at local and national forums, television, and social media.

Dr. Rajeev Gupta

Chairman- Medical Sciences
Chairman – Preventive Cardiology, General Medicine
& Research



Education Qualification :

- ▶ MBBS, Sardar Patel College, Bikaner.
- ▶ Distinctions/ Honours in Physiology, Anatomy, Pathology, Pharmacology, Forensic Medicine, Surgery, Medicine & Community Medicine.
- ▶ MD (Medicine), Post Graduate Institute of Medical Education & Research (PGIMER), Chandigarh, India.
- ▶ PhD (Social & Preventive Medicine-Cardiovascular epidemiology), SMS Medical College, Jaipur.

Work Experience :

- ▶ Chairman, Academic & Research Development Unit, Rajasthan University of Health Sciences, Government of Rajasthan, Jaipur.
- ▶ Guest faculty – Medicine at RUHS, College of Medical Sciences.
- ▶ Senior Consultant & Head of Medicine, Director- Research & Academics, Fortis Escorts Hospital, Jaipur, India.
- ▶ Professor of Medicine, Mahatma Gandhi Medical College, Jaipur
- ▶ Head of Medicine & Cardiology, Monilek Hospital & Research Centre, Jaipur
- ▶ Worked at Cornell University, New York & Hammersmith Hospital, London

Pioneer in :

- ▶ Pioneer in Coronary Heart Disease & Hypertension Epidemiology in India.
- ▶ Established the first Cardio-vascular Epidemiology Research Laboratory in non-governmental sector in the country.

Awards & Recognition:

- ▶ Cardiology Society of India. Dr. D.P. Basu Award at 46th Annual Conference of CSI. Educational status & CHD epidemiology in rural populations in Rajasthan.
- ▶ Indian Council of Medical Research (ICMR), Govt. of India. ICMR- Chaturvedi Memorial Award (1995) for significant research in Cardio-vascular epidemiology.
- ▶ Cardiological Society of India- Dr.VV Shah (NSPHERE) Oration & Gold Medal at 52nd annual Conference, Chennai on "Coronary Heart Disease epidemiology in India : Lessons learnt & future directions".
- ▶ Hypertension society of India. Dr. S.N. Shah oration at 25th National Conference of Hypertension Society of India.
- ▶ Invited lectures at World Congress of Cardiology, American College of Cardiology (2015), and European Society of Cardiology.
- ▶ More than 900 publications including 600 Original Articles and 100 Book Chapters.

OPD Timing :

Monday - Saturday, 9 am to 5 pm



ETERNAL HOSPITAL

Unit of Eternal Heart Care Centre & Research Institute Pvt. Ltd.



Call Us : 0141-5174000 or 9549158888 | Email Us at: contactus@eternalheart.org

3 A Jagatpura Road, Near Jawahar Circle, Jaipur - 302 017, Rajasthan

SUMMARY ACHIEVEMENTS

1. Current positions:

- a. Chair, Preventive Cardiology and Medicine, Eternal Heart Care Centre & Research Institute, Jaipur (www.eternalhospital.com).
- b. Honorary Professor Medicine, Mahatma Gandhi University of Medical Sciences and Technology, MGUMST, Jaipur (www.mgumst.org).
- c. Distinguished Scientist, Birla Institute of Scientific Research, Jaipur (www.bisr.res.in).
- d. Chair, Centre for Development Communications NGO, Jaipur (www.cdcindia.org).

2. External positions:

- a. Member Project Approval Committees, Indian Council of Medical Research (ICMR).
- b. Member, G-20 group for non-communicable diseases (C-20 India).
- c. Board Member (2020-2022), World Heart Federation, Geneva.
- d. President, Indian Society of Hypertension.
- e. Convenor Prevention Council, Cardiological Society of India.
- f. Steering committee, ICMR-NCDIR, Bengaluru.

3. Former positions:

- a. Chair, Academic Research Development, Rajasthan University of Health Sciences, Jaipur;
- b. Executive Director, MGUMST, Jaipur;
- c. Director, Medicine, Fortis Escorts Hospital, Jaipur.
- d. Director Research and Head, Monilek Hospital & Research Centre, Jaipur.

4. Key achievements:

- a. Pioneer in cardiovascular epidemiology in India.
- b. First epidemiology lab in the non-government sector in the country in 1980's.
- c. 1100+ scientific publications, 700+ original articles and reviews in major journals- *Lancet*, *New England Journal of Medicine*, *Nature*, *JAMA*, *JACC* and *BMJ*, 125 book-chapters, 5 books.
- d. 170,000+ citations at Google Scholar. Ranked in top 0.1% global scientists, 1st in India and 108th globally in his field by Stanford University ranking algorithm.
- e. Member steering committees in major international and national epidemiological studies.
- f. Research collaboration with McMaster University, Canada; St John's Medical College, Bengaluru; All India Institute of Medical Sciences, New Delhi; University of California San Francisco, USA; University of Toronto, Canada; etc. International collaborator for the Global Burden of Diseases study (Seattle) and Non-Communicable Risk Factor Study Collaboration (NCDRISC), London.
- g. Invited speaker at conferences of European Society of Cardiology, American College of Cardiology, World Heart Federation, International Society of Hypertension, European Society of Hypertension, and International Diabetes Federation.
- h. Board member of World Heart Federation. Created models for low and lower-middle income countries for prevention of heart diseases. Roadmaps for better management of diabetes, hypertension, high cholesterol and secondary prevention. Highlighted importance of pollution control. Focus on rheumatic heart disease.

5. Research awards:

- a. Cardiological Society of India-Umarani Banerjee Oration, 2022
- b. Lipid Association of India Lifetime Achievement Gold Medal, 2021
- c. Indian Society of Hypertension Dr VV Muthusamy Gold Medal, 2018
- d. Indian Society of Hypertension Dr RJ Wegmann Gold Medal, 2014
- e. Hypertension Society of India Dr SN Shah Award, 2006
- f. Cardiological Society of India -VV Shah NSPHERE Oration, 2000
- g. Indian Council of Medical Research-Chaturvedi Memorial Award, 1997
- h. Cardiological Society of India -DP Basu Award, 1994

- i. Pfizer Gold Medal for Postgraduate Study, 1976
- j. University of Rajasthan Sawai Mansingh Gold Medal for MBBS, 1975
- 6. Institution building (Advisor and Mentor):**
 - a. Eternal Hospital Sanganer: Eternal Foundation Charity Trust, Jaipur.
 - b. Eternal Heart Care Centre & Research Institute, Jaipur.
 - c. Academic Research Development Unit, Rajasthan University of Health Sciences, Jaipur.
 - d. Dr KD Gupta Memorial Medical Library, MGUMST, Jaipur.
 - e. Mahatma Gandhi Medical College, MGUMST, Jaipur.
 - f. Centre for Development Communication, Charitable Trust, Jaipur.
 - g. Jaipur Heart Watch Foundation, Jaipur.
 - h. Monilek Hospital & Research Centre, Jaipur.
- 7. Academic:**
 - a. Teacher at various medical colleges and institutions.
 - b. Mentored and guided number of PhD, MD/DNB (Medicine), MPhil and MSc students at the University of Rajasthan and the National Board of Examinations.
 - c. Editor: *RUHS Journal of Health Sciences*, Jaipur.
 - d. Editor: *South Asian Journal of Preventive Cardiology*, JHW Foundation.
- 8. Models for prevention and control of cardiovascular diseases.**
 - a. Creation of nationwide InSH hypertension clinics (6,000+).
 - b. Hypertension care quality improvement program: Hypertension registry in India.
 - c. Indian School of Hypertension for primary and secondary care physicians.
 - d. Heart-disease prevention focussed yoga programs.
 - e. Cardiological Society of India, Prevention Guidelines 2000.
 - f. Concept of medical outreach services in rural/underserved locations in Rajasthan.
 - g. Founder and Trustee, Jaipur Heart Watch Foundation, Jaipur.
 - h. Participates regularly in public health-education programs at local and national forums, TV and social media.

SPECIFIC CONTRIBUTIONS

- Pathbreaking population, community, and clinic-based research in coronary heart disease epidemiology; strategies to control risk factors over the past 40 years.
- The first clinic-based prospective studies in India in early 1980's to identify heart disease risk factors of importance in India.
- Highlighted high NCD burden in rural areas.
- Population-based studies in rural/urban populations of Rajasthan to identify magnitude of heart disease risk factors.
- PhD thesis reported that a greater prevalence of heart disease in urban populations was significantly associated with cardiometabolic factors (obesity, hypertension, diabetes, lipids). These results have been externally validated.
- Performed the first meta-analyses of population-based studies in India showing increasing trends in coronary heart disease, hypertension, diabetes and other risk factors in India.
- Member of ICMR project approval committees on cardiovascular diseases since 1997. Guided researchers across the country for project development and implementation. Evaluation of Indo-UK and Indo-US scientific projects.
- Population-based intervention studies in rural and urban populations of Rajasthan to reduce the burden of heart disease risk factors among women (DST, India).
- Study focused on prevention of NCD in school children (IDF, Belgium).
- Led studies funded by ICMR-NIH, USA to (a) promote NCD prevention in 40,000+ rural participants; (b) promote adherence in patients with heart disease using CHWs; (c) promote

research by conducting CME for postgraduates at St John's Medical College, Bengaluru, RUHS and World Heart Federation.

- Mentored scores of PhD students at University of Rajasthan, and medical colleges and medical institutions. Many of the students are presently in top positions in academia and clinical services.
- Chaired the Prevention Council of the Cardiological Society of India twice. Developed modules for prevention of coronary heart disease by developing first CSI Prevention Guidelines (2000). In the second term, focus is on children for the primordial prevention of heart diseases.
- As President of the Indian Society of Hypertension (InSH) he has focussed on continuing medical education of physicians across the country. He oversees development of online teaching programs and contributes to Indian School of Hypertension for certification of primary and secondary care physicians.
- Creation of 6,000+ InSH-certified blood pressure clinics across the country. Another program of hypertension quality improvement among 5000+ physicians.
- Board member of World Heart Federation, Geneva. Created road maps for better management of diabetes, hypertension, high cholesterol and secondary prevention focused on lower-middle and low income countries. Highlighted importance of pollution control. Focus on rheumatic heart disease.
- Development of multiple non-governmental and governmental organizations in Rajasthan and elsewhere as advisor and mentor.

IMPACT

- The impact of population, community, and clinic-based basic and applied research in coronary heart disease has been widespread.
- The research stimulated investigators at government and non-government institutions to develop programs at their institutions.
- Publications of meta-analyses of population-based studies in India showing increasing trends in coronary heart disease and risk factors were used by ICMR and other scientific organizations for advocacy to government of India to warn about emerging epidemic of NCDs.
- The studies were partially responsible for development of national programs on non-communicable disease prevention and control by government of India.
- Protocols of primordial prevention of NCD risk factors in school children have been incorporated in the syllabus of the Board of Secondary Education, Rajasthan and Central Boards of Education.
- Students who participated in research projects and completed PhD/MD are in top positions in academia and clinical healthcare.
- His modules for Prevention Council, Cardiological Society of India (2000) have been taken up for developing NCD-specific national guidelines for hypertension, diabetes, lipids, etc.
- Contributed to development of road-maps for control of hypertension, diabetes and high cholesterol by World Heart Federation, Geneva.
- Guiding force behind setting up 6,000+ Indian Society of Hypertension-certified clinics across the country.
- National hypertension-management quality improvement program.
- Contributed to development of non-government and government organizations in Rajasthan and nationally:
 - Mahatma Gandhi University of Medical Sciences and Technology, Jaipur.
 - Academic Research Development Units, Rajasthan University of Health Sciences, Jaipur.
 - Preventive Yoga programs, Yog Sadhana Kendra, Jaipur.
 - St John's Research Institute, Bengaluru.
 - Quality improvement programs, Cardiological Society of India- Kerala Branch.
 - India Hypertension Control Initiative, Government of India.

OTHER INFORMATION

1. Education

- a. Schooling at Bikaner (Rajasthan). Among top ten students at Rajasthan Board of Secondary Education in 10th and 11th class examinations.
- b. Passed with distinction at all MBBS examinations. Topped Rajasthan University in MBBS, Sawai Man Singh Gold Medal, 1975.
- c. Postgraduate studies at Post Graduate Institute of Medical Education and Research, Chandigarh. Topped the admission test, 1976. MD (Medicine) at 1st attempt, 1979.

2. Major achievements are in the fields of:

- a. Medical institutional building and helped in creation of a number of medical institutions- non-government hospitals and medical college and speciality units in state universities and colleges.
- b. Medical research with a lifelong focus on cardiovascular research including (i) population-based cardiovascular epidemiology, (ii) population and clinic-based cardiovascular disease prevention, (iii) clinical research and innovative clinical trials focused on health workers, (iv) technology-based prevention research in rural populations, and (v) implementation research for prevention and control of cardiovascular diseases.
- c. Advisory capacity at national and international organizations for prevention and control of heart diseases, including government and non-governmental societies.

3. Social work:

- a. Rural outreach services in 1980s in Rajasthan state. Created a model to provide regular specialist services for rural patients and general population.
- b. Regular conduct of camps in underserved locations to raise awareness of heart diseases and their prevention and control.
- c. Regular talk-shows on Doordarshan TV focussing on prevention and better management of heart disease and its risk factors.
- d. Development of novel models of clinical care at secondary and tertiary care hospitals.
- e. The NGO that he heads is at the forefront of urban sanitation and control of soil, water and air pollution in the country. Solid waste-management at multiple large cities in India.

DETAILED VERSION

EDUCATION

- Rajeev Gupta has had a brilliant academic career.
- Schooling at Bikaner (Rajasthan). Secondary education from Sadul Public School, Bikaner. Among the top ten meritorious students at the Rajasthan Board of Secondary Education in Secondary and Higher Secondary examinations.
- Medical education (MBBS) from SP Medical College, Bikaner after securing a high position at the pre-medical admission test in 1970.
- Passed with distinction at all the examinations (University of Rajasthan) with honours in Anatomy, Physiology, Pathology, Pharmacology, Forensic Medicine, Preventive and Social Medicine, Surgery and Medicine. He topped the University in the first (1971) and final MBBS (1975) and was second at the second MBBS examinations (1973). Sawai Man Singh Gold Medal of the University of Rajasthan 1975.
- Postgraduate studies in Medicine at Post Graduate Institute of Medical Education and Research, Chandigarh after topping the admission test in 1976. Passed MD (Medicine) examination on the first attempt in 1979.
- A brief stint as a teacher in medicine at a government medical college (Jodhpur) (1979-1980).
- Consultant practice at Jaipur from 1980 to date. During practice, he developed a keen interest in cardiovascular disease prevention and runs a prevention clinical for the last 40+ years.
- PhD from the University of Rajasthan (SMS Medical College, Jaipur) on the subject of *Coronary heart disease epidemiology in Rajasthan* in 2006.
- Fellowships from multiple international academic societies- American College of Cardiology (Washington), European Society of Cardiology (Paris) and Royal College of Physicians (London). Also been awarded fellowships from many Indian scientific and medical societies.

MAJOR ACHIEVEMENTS

Major achievements of Dr Rajeev Gupta are in the fields of (a) medical institutional building, (b) medical research, (c) social work and non-communicable disease prevention, (d) teaching and mentoring, and (e) development of novel models of clinical care.

A. MEDICAL INSTITUTION BUILDING

Dr Rajeev Gupta has helped in the creation of many non-governmental and governmental organizations in the state of Rajasthan and elsewhere in his capacity as advisor and mentor. Over the past 40 years, he has contributed to the development of the following major institutions (in descending order).

Eternal Hospital Sanganer, Jaipur (2022 to date) (www.eternalhospital.com/sanganer). Trustee. There has been a paradigm shift in healthcare in the past 10 years in our country with an intense focus on the provision of high-quality healthcare to all sections of the society. To create a model of high-quality specialist health care at affordable costs this 150-bed hospital was started in December 2022. The

Eternal Foundation is a charitable organization that provides quality healthcare in all the fields of medicine and surgery with the support of the state and central government-led health insurance schemes.

Eternal Heart Care Centre & Research Institute, Jaipur (2013 to date) (www.eternalhospital.com):

Eternal Hospital (A unit of Eternal Heart Care Centre and Research Institute) is a state-of-the-art tertiary care hospital in Jaipur. The hospital has a capacity of 250 beds with state-of-the-art departments of Cardiology, Cardiac Surgery, Neurology, Neuro Surgery, Orthopaedic & Joint Replacement, Nephrology, Paediatrics, Gynaecology, Critical Care, Urology, Pulmonology, Gastroenterology, Endocrinology and many more. Dr Gupta has been involved in the setting up of this hospital from its early days and is presently the chair of medical sciences. The Hospital has a knowledge-sharing arrangement with Mount Sinai Hospital New York USA, which has been internationally recognized for its top-performing physicians and revolutionary research centres. The hospital has emerged as a destination of choice for many national & international patients owing to the exclusive services and excellent medical outcomes. It is the only hospital in the state with JCI (Joint Commission International)- USA Based organization accreditation. Apart from this hospital is accredited by NABH, NABL and has been awarded for Nursing Excellence by NABH.

Academic Research Development Unit, Rajasthan University of Health Sciences, Jaipur (2011-2022)

(www.ruhsraj.org): Rajasthan University of Health Sciences (RUHS) was created out of the erstwhile University of Rajasthan by an ordinance of the government in 2007. This was subsequent to the central government guidelines and a similar model exists in many states of our country. The university had an intense focus on health research since its early days. To streamline the academic research activities a separate unit was created by the Board of Management of the RUHS. Dr Gupta was appointed as its first chair in 2011 and continued in this position until 2022 (70 years of age). During this tenure, multiple novel programs were initiated:

- *RUHS Journal of Health Sciences* (www.ruhsjhs.in). The first publication of this quarterly journal commenced in 2016. The main objective is to publish peer-reviewed original research and reviews covering a diverse range of disciplines viz. medicine, pharmacy, dentistry, paramedical, and allied health sciences. The journal is published according to state and central government guidelines and is registered with various national and international agencies. It has also achieved international indexing according to National Medical Commission of India directives.
- *RUHS Research Fund*: Financial support to medical research activities across various state medical colleges. A unique program to fund 10 peer-reviewed research projects annually was initiated with a grant of up to INR 10 lakh per project. Every project was internally and externally peer-reviewed. The selection process follows the Indian Council of Medical Research directives. More than 30 projects have been sanctioned, completed and published during the tenure.
- *Workshops*: Research methodology workshops were conducted on the university campus and across RUHS-affiliated medical and dental colleges in the state. Invited faculty from the Indian Council of Medical Research and other premier institutes to participate in the workshops.

Mahatma Gandhi University of Medical Sciences and Technology, Mahatma Gandhi Hospital and Medical College, Jaipur: 1999 to date (www.mgumst.org): Dr Gupta helped establish this, the first non-government medical college in Rajasthan state as a trustee and founding executive director, in the year 2000. This started as an undergraduate teaching institution and has rapidly upgraded to provide post-graduate and super-specialist medical education to hundreds of students each year. The initial 700-bed general hospital has been upgraded to almost to 2000-bed hospital with super-speciality wings devoted to diagnosis, management and prevention of cardiovascular diseases, cancers, etc. A basic science institute has also been started with local and international faculties.

Monilek Hospital and Research Centre, Jaipur (1985-2000) (www.monilekhospital.com): This state-of-the-art tertiary care hospital was established in 1986 with help of non-resident Indians. This hospital was the first to start a successful renal transplantation program in Rajasthan state. Apart from specialities of urology and nephrology, the hospital has state-of-the-art intensive care units and departments of cardiology, gastroenterology, laparoscopic surgery, neurology and neurosurgery.

Small non-government hospitals (1980s). The town of Jaipur initiated the trend of small non-government general hospitals in the state of Rajasthan. Dr Gupta pioneered this concept and was instrumental in setting up at least half a dozen 20-50 bed general hospitals in the town and smaller cities of Jaipur in the early 1980's. In Jaipur, he helped start Meera Hospital (presently 150 beds), Shah Hospital (100 beds), Monilek Hospital (150 beds), Apex Hospital (200 beds), Fortis-Escorts Hospital (250 beds) and EHCC Eternal Hospitals (2 hospitals, 350 beds). He has also contributed significantly to creation of hospitals in smaller towns of Rajasthan and elsewhere, e.g., Srimadhopur, Sikar, Pilani, Veraval, etc.

B. MEDICAL RESEARCH

Medical Scientists Database: He is one of the most cited medical scientists in the globe and according to Stanford University-Based Annual Ranking of global scientists, he has consistently been among the top 0.1% of global scientists for the last many years. He is currently ranked 1st in India and 108th globally in his field of research (medicine, cardiology, and hypertension research) by this ranking system. He also figures prominently in other research databases and is consistently among the top 10 scientists from India.

National Awards: Dr Gupta received the most prestigious award for cardiovascular diseases instituted by Indian Council of Medical Research and Government of India for his research in cardiovascular epidemiology in 1995. Apart from this he has received CSI-Umarani Banerjea Oration award in 2022, Indian Society of Hypertension Gold Medal in 2014; Hypertension Society of India Dr SN Shah Award in 2006; CSI-VV Shah NSPHERE Oration in 2000; CSI-DP Basu Award in 1994; etc. Apart from these awards, there is an enviable array of awards instituted by various governmental and non-governmental organizations throughout his academic career.

Medical Publications: Dr Gupta has a very large number of publications in peer-reviewed journals and as the enclosed biodata shows he has more than 1100 publications that include more than 750 original scientific articles, reviews and book chapters. He has received awards from many learned societies in India and abroad for his research activities as detailed in the CV. He has a unique achievement of publishing more than 100 articles in *The Lancet* (www.thelancet.com) which is the most-cited scientific journal in the world.

Cardiovascular Epidemiology Research: Epidemiology is a basic science of medicine and has contributed immensely to the treatment of our patients. Dr Gupta set up the first cardiovascular epidemiology research centre in the non-governmental sector in India. Epidemiology involves multidisciplinary research. There is need for a strong input from social sciences as well as basic sciences. Since late 1980s, Dr Gupta engaged in cardiovascular epidemiology collaborative research with partnerships from the departments of statistics, home science, sociology, botany and chemistry of the University of Rajasthan and community medicine, medicine and cardiology departments of SMS Medical College, Jaipur and SP Medical College, Bikaner. He mentored a number of students for PhD and postgraduate degrees in medicine. His initial research focused on schoolchildren in Jaipur. With generous grants from Jan Mangal Trust, Jaipur he performed a large rural and urban epidemiology survey (Jaipur Heart Watch, JHW-1). Since then he has been conducting large epidemiological surveys in Jaipur (JHW series, 1991-2015) to evaluate changes in cardiovascular risk factors among urban populations. He also chairs the India Heart Watch study on risk factors in urban populations in India and is a member of ICMR-INDIAB survey, the largest national survey for cardiovascular risk factors. These studies are well-known internationally and published in many prestigious journals.

Clinical Research: Since the early part of his career Dr Gupta has been engaged in clinical research devoted to cardiovascular diseases. In the early part of his career, these were observational studies devoted to non-invasive cardiology, stress testing and echocardiography. He has also conducted a large number of clinical trials sponsored by various international agencies. He has been on national and international steering committees of many such studies. He is a pioneer in the concept of developing prospective registries in India. In 1980's he initiated Jaipur Heart Watch registries in patients with cardiovascular diseases and his centre is currently a member of American College of Cardiology CATHPCI Registry.

International and National Collaborations: For the last twenty years he is engaged in an international cardiovascular epidemiological study (PURE Study, sample size >190,000). This study is prospectively evaluating various socio-cultural, dietary and biological cardiovascular risk factors and incidence of coronary heart disease using a standardized protocol. This is spread over 25 low and middle-income countries in Asia, Africa, Europe and South America. Dr Gupta is member of the international steering committee of this study. The study is being coordinated from McMaster University, Canada and Indian headquarters are at St Johns Medical College, Bangalore. He also has international research collaborations with University of California San Francisco, USA; University of Texas Rio Grande Valley, USA; and Leicester University, UK. Nationally he has collaborated with researchers at All India Institute of Medical Sciences, New Delhi, Delhi University South Campus, New Delhi, St John's Medical College and St Johns Research Institute, Bengaluru, Post Graduate Institute of Medical Education & Research, Chandigarh, Sri Ramchandra University, Chennai, and many others.

Genetic Studies: 2010s to date Dr Gupta performed the first chromosomal study on protein calorie malnutrition as intern in mid 1970's. Presently he is engaged in genetic epidemiology research to elucidate genetic mechanisms in metabolic syndrome, diabetes and cardiovascular diseases. Past studies have been in collaboration with All India Institute of Medical Sciences, New Delhi on genetics of obesity and with University of Delhi on diabetic nephropathy. He has been funded by US National Institutes of Health for study of diabetes genetics in endogamous ethnic groups in India.

South Asian Journal of Preventive Cardiology: 1997-2015 This national peer-reviewed journal was started by Dr Gupta in 1987 and continued publication for 20 years. It published original peer reviewed articles as well as review articles useful for both clinicians and researchers. It is very popular among the community medicine fraternity of India.

Research funding: As a principal investigator he has received direct research funding from the following national and international agencies:

- Indian Council of Medical Research, New Delhi
- Department of Science and Technology, India
- National Institutes of Health, National Heart Lung Blood Institute, USA
- National Institutes of Health, National Institute for Digestive, Diabetes and Kidney, USA
- Population Health Research Institute, Hamilton, Canada

Additionally, he has received indirect research funding from many international government and philanthropic scientific agencies, industry, and local philanthropic institutions.

C. SOCIAL WORK: NON-COMMUNICABLE DISEASE PREVENTION

A major focus of Dr Gupta's career has been preventive cardiology with a focus on non-communicable disease prevention and control in India. He has been among the leaders in cardiovascular epidemiology and prevention in the country and his publications and activities have influenced policy and practice. He has also initiated many novel policy-, community-, and person-oriented preventive health and continuous medical education programs.

G-20 and C-20 programs on non-communicable disease prevention: India heads the G-20 group this year and Dr Gupta is a member of C-20 (Civil Society) group that advises the G-20 for the development of community-oriented prevention policies for major health issues in the middle-income and low-income countries. He is a core member of the non-communicable prevention and control group. The final policy document has been prepared and shall be submitted to the government of India and G-20 members in July 2023.

Indian Society of Hypertension (InSH) national programs: This society was founded in 1970s for the promotion of research in hypertension, the most important cause of cardiovascular deaths in the country. The present membership is 2500+ and Dr Gupta is the elected president from 2021-2024. Under his leadership, the society has been conducting regular CME programs for physicians at primary and secondary care levels. Ongoing programs are:

- *Certified Hypertension Experts:* Online courses are provided by national experts in hypertension and more than 1000 physicians have been certified so far.
- *Hypertension CME:* Under the sponsorship of InSH nationwide weekly hypertension CME programs are being conducted. So far more than 100 CMEs have been conducted with update 5000+ physicians.
- *The InSH BP Clinics program:* This has enrolled more than 6000 medical clinics all across the country. All the physicians are also participating in this registry-based hypertension research program. This endeavour shall promote healthcare research at the grassroots level in India.
- *Mission Hypertension Awareness and Control Initiative:* This nationwide initiative has just been started by InSH in collaboration with World Hypertension League. The target is to screen

more than 100,000 hypertension patients with focus on management practices across 6000 sites in India.

Cardiological Society of India (CSI) Prevention Council programs: Dr Gupta is the convenor of the Prevention Council of CSI, the national organization of all cardiologists in the country (established 1948, current membership 4,400+). This position is from years 2022-24 and he advises the CSI for various population and clinic-based interventions for cardiovascular disease prevention. He has recently initiated school health programs and general public awareness campaigns. He is involved in the development of heart disease prevention guidelines by CSI. In an earlier term as Convenor (1999-2000) he published the first iteration of CSI guidelines for prevention of heart disease in 2000. He is the Scientific Chair of the 5th National CSI Cardiac Prevention Conference at Jaipur in September 2023.

Eternal Heart Conclave: Annual cardiovascular disease update and CMEs are conducted by Eternal Heart Care Centre & Research Institute in collaboration with the faculties of Mount Sinai Hospital, Icahn School of Medicine, New York. Dr Gupta is the principal advisor. The focus of this 2-day program is state-of-the-art didactic and practical learning and scope is from prevention to coronary and structural interventions. Five annual sessions focused on secondary care physicians and trainee and junior cardiologists have been conducted so far.

Cardiovascular prevention clinics: Primary prevention of heart disease (and other non-communicable diseases) is a focus area of national and state governments as reiterated by multiple national programs. Dr Gupta pioneered this concept by developing rural outreach programs for early diagnosis and management of heart diseases in 1980s. Apart from his own clinic, he developed heart clinic at Srimadhopur (Sikar district, Rajasthan) in the 1980's and subsequently developed heart disease prevention programs at Monilek Hospital and Fortis-Escorts Hospital, Jaipur. He also helped in developing cardiovascular disease prevention programs at government and private medical universities.

Yoga-based prevention program: Yoga and yogic techniques have attracted worldwide attention, especially for the prevention of cardiac diseases. As an early pioneer in prevention Dr Gupta developed and implemented a heart disease prevention with yoga module at Yog Sadhana Kendra, Jaipur and its satellites. This program is still active.

Centre for Development and Communication, CDC, Jaipur (1993 to date): This NGO with a national presence was started by Dr Gupta and his associates in 1993. He is currently Chairperson of this NGO. Uniquely, this organization provides basic sanitation service in state of Rajasthan, Maharashtra, Gujarat, Madhya Pradesh, Uttar Pradesh and Himachal. Presently this organization is engaged in providing sanitation service to urban residents of large areas of Jaipur and smaller towns of Rajasthan, Nagpur and parts of Mumbai in Maharashtra, and Surat in Gujarat. There is also an active urban health component in this program that includes ongoing research and innovation in public health and hygiene.

The Medical Practitioners Society, Jaipur (1980-2000): This society was established by non-governmental qualified medical and dental physicians in Jaipur in 1939. For the next 40 years its gatherings were devoted to socio-cultural events. In 1981 when Dr Gupta joined the society he realized the importance of continuing medical education for the practicing physicians and was appointed as the first scientific executive of the society in 1983. For the next 7 years as scientific

secretary of the society he devoted time and energy to organize monthly clinical meeting and lectures by eminent national and international teachers for this 800 member strong organization. More than 12 meeting are organized under the aegis of the society every year and after more than 40 years this tradition of CME continues.

D. TEACHING AND MENTORING

Guest lectures: His area of expertise is cardiovascular epidemiology and preventive cardiology and he is recognized as one of the most eminent scientists in this area. Dr Gupta is regularly invited to lecture at international conferences of the American College of Cardiology, European Society of Cardiology, World Heart Federation, International Diabetes Federation, International Society of Hypertension, European Society of Hypertension and World Health Organization. He lectured regularly at national conferences of Cardiological Society of India, Association of Physicians of India, Indian Society of Hypertension, Research Society of Study of Diabetes in India, Diabetes India and many other learned societies (details enclosed).

MD (Medicine) and DNB (Medicine) Teaching (1979 to date): He began his career as a teacher in government medical colleges of the state and was a hugely admired teacher. While at SN Medical College, Jodhpur he initiated and guided postgraduate students in topics related to cardiovascular disease. Subsequently he mentored a generation of medical postgraduates at SMS Medical College, Jaipur and elsewhere. Since 2010 he has been a recognised guide for DNB (Medicine) program of National Board of Examinations. More than 1 dozen students (list enclosed) have completed these training under his guidance and most student have passed the tough DNB examination in the first attempt.

Rajasthan University of Health Sciences and University of Rajasthan 1990s to date: Long standing collaboration with science and humanities departments in University of Rajasthan, Jaipur were developed and since 1990's a multitude of postgraduate students have pursued PhD and MD courses under his guidance and mentorship (List enclosed). Importantly, this was one of the first examples of successful and lasting collaborative research programs involving medical faculties with social sciences. He has been a recognised PhD guide for Rajasthan University of Health Sciences.

Non-Government Medical College: Hon Professor: 2000s; Since 1999 he has been appointed as professor in medicine at Mahatma Gandhi National Institute of Medical Sciences and once the classes started at this new medical college he has resumed the teaching of undergraduate students in this medical college. As executive director (1999-2002) and trustee of this medical college he has been instrumental in developing core educational programs.

Government Medical College: 1970's: Dr Gupta began his career as a teacher at one of the government medical colleges in Rajasthan. He joined state services as assistant professor in medicine at Dr SN Medical College, Jodhpur in 1979 soon after completing the MD (Medicine) from prestigious Postgraduate Institute of Medical Education and Research, Chandigarh. However, due to family reasons he shifted to Jaipur to start working in non-government sector after one year. His undergraduate students still remember and cherish his teachings.

Grass-roots: There is a Chinese aphorism that "If you want one year of prosperity, plant corn; if you want ten years of prosperity, grow trees; if you want hundred years of prosperity, educate people". Dr

Gupta is a firm believer in this maxim and has created a unique medical teaching and research department at his place of work, Monilek Hospital and Research Centre, Jaipur. Every year MSc and PhD students from the University of Rajasthan and MD students from different medical colleges of the state of Rajasthan are trained in research methodology and perform studies under his guidance. This is the true institution building.

E. INNOVATIONS IN PATIENT CARE:

William Osler, the famous physician and scientist said that if you wish to become famous locally see your patients well, if nationally then talk well at medical conferences and internationally then write well. Dr Gupta has followed this maxim to the fullest extent. He is one of the busiest clinicians of Jaipur. His clinical skills are widely known and he has patients not only from all over the state of Rajasthan but also from neighbouring states of Haryana, Delhi, Punjab and Uttar Pradesh. He has in addition contributed to the following patient friendly innovations:

Rural community outreach services: Dr Gupta has realized the importance of public health since the early part of his career. The theme of his research for the last 15 years has been societal influences on health, especially cardiovascular health. He has developed models for urban and rural health care in the state of Rajasthan. For more than 10 years he successfully imparted a rural health-care from Jaipur and visited the village of Srimadhapur in Sikar district under the community outreach effort. He gradually encouraged young doctors to provide specialist services in small towns of Rajasthan and was instrumental in creating a network of specialists who would commute to places far and wide out of Jaipur to provide specialist services in far-flung districts of the state. His initial team included specialists in gynecology, ophthalmology, and orthopedics etc. Later on he was able to pass on the baton to younger physicians and the program is presently running successfully in Srimadhapur 20 years after the inception. This program was so successful that there are myriads of specialists of all types involved in community outreach services from different hospitals of Jaipur.

Preventive medicine: Dr Gupta is one of the most famous proponents of preventive medicine in the country. He believes that all the medical treatment is essentially preventive, prevention of death! To this extent he practices and teaches early preventive treatment in hypertension, atherosclerosis, and cardiovascular diseases.

Low cost medical care of acute coronary syndromes: Management of acute coronary syndromes has undergone a sea change in the last 30 years. In early part of his clinical career he popularized the concept of domiciliary care of patients with acute coronary syndromes. Subsequently when the concept of intensive care units evolved he was the first one to start ICU in private sector in Jaipur in 1981. The therapy of acute coronary syndromes and acute myocardial infarction has evolved dramatically recently. Dr Gupta remains on forefront of these innovations and has set up a low cost ICU at Monilek Hospital, Jaipur for caring of such patients. The important components of management of these conditions remain evidence-based interventions such as early thrombolysis, early ambulation and short hospitalization. The Create study, *vide supra*, is an effort in this direction and if glucose-potassium-insulin treatment is effective, it would be a major low-cost life-saving intervention in acute myocardial infarction.

Other innovations: He has developed other multiple innovations in clinical practice. These include shortened hospital stay for patients with various medical conditions, rapid-track diagnosis systems in

emergency, shared-care concept in non-government sector, and the concept of group medical practice.