BECAUSE OF ME
HE SHALL LIVE
जीविष्यति मयैवासौ
St. John's
National Academy of Health Sciences

icmr CCoE
INDIAN COUNCIL OF MEDICAL RESEARCH
COLLABORATING CENTRE OF EXCELLENCE

GCTF
Global clinical trials forum
WHO Managed Network

DIVISION OF CLINICAL RESEARCH AND TRAINING

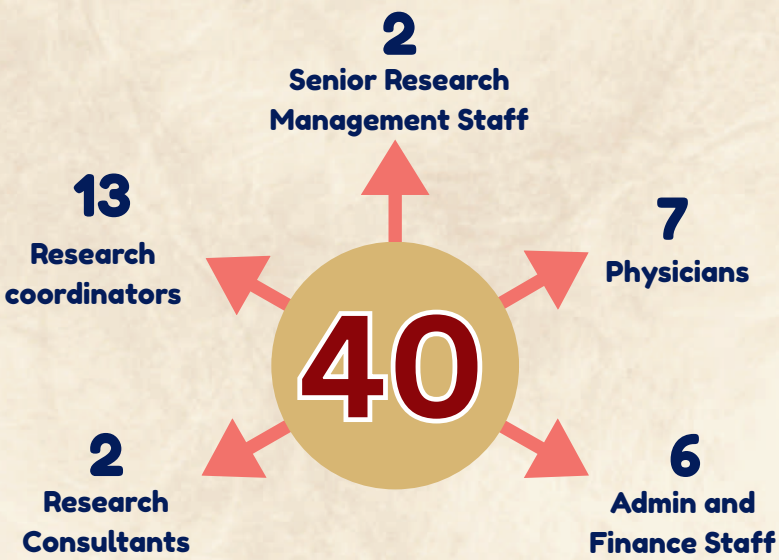
St John's National Academy of Health Sciences

Bengaluru, India

Our Mission

- To Develop and Conduct Clinical Research with special relevance to India and other developing countries
- To achieve world class research standards at 'realistic' costs
- To transform knowledge to better health through advocacy and policy change

Our Team



Genesis of DCRT

In 1994, Dr Prem Pais began work with cardiovascular disease research and set up the Clinical Epidemiology Research and Training Centre (CERTC) at St John's Medical College. Dr Denis Xavier joined the group in 1998. Dr Denis Xavier has been the Head of the Division since 2015. This later evolved into the Division of Clinical Research and Training (DCRT) and was integrated into the St John's Research Institute in 2004.

The Division of Clinical Research and Training (DCRT) is a part of St. John's Research Institute, established in the year 2000. The St John's Research Institute (SJRI) is one of the institutions of St John's National Academy of Health Sciences. The other institutions include St John's Medical College Hospital, which has 2000 beds; St John's Medical College, which is ranked among the top medical colleges in India; and St John's College of Nursing.

From its inception 62 years ago (in 1963), St. John's set before it an ideal of excellence in academic training as well as service to society. In 2000, St John's commitment to excellence in research led to the setting up of the Institute dedicated to research and capacity development.

The Research Institute has 8 Divisions:

- Clinical Research and Training
- Epidemiology and Biostatistics
- Health and Humanities
- Infectious Diseases
- Medical Informatics
- Mental Health and Neurosciences
- Molecular Medicines
- Nutrition

67
Large Multi-centre Projects

160,400+
Participants

310+
Publications

Research Projects

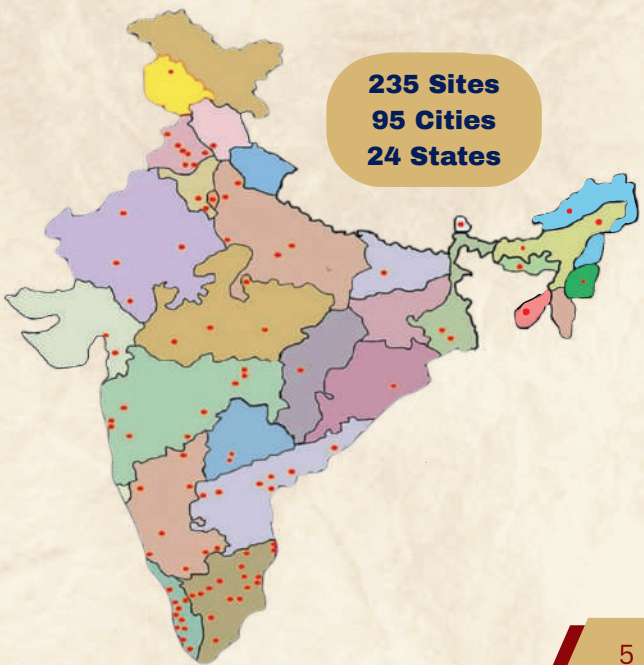
The Division of Clinical Research and Training (DCRT) designs and conducts large national and international clinical trials and observational studies in cardiovascular disease (CVD), diabetes, oncology, nephrology and infectious diseases.

Our collaboration includes over 230 Institutions in 55 cities across India and South Asia. We have conducted 67 large multi-centre projects with about 160,400 participants.

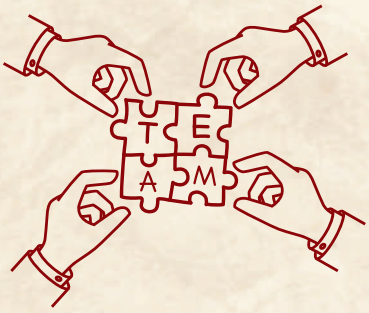
Most of these are investigator-initiated studies funded by peer-reviewed grants; some are industry-supported. Our studies have been published in leading journals, including the Lancet(20+22), JAMA, NEJM (17), Nature Cardiovascular, American Heart Journal, Circulation, European Heart Journal, Indian Heart Journal, JAPI, IJMR etc. Click here for our publications.

Global Network and Affiliations

Collaborations in India



Meet the Team



Dr Prem Pais
Adj. Professor of Medicine

Dr Prem Pais is the former Dean and Head of the Department of Medicine at St John's Medical College, Bangalore, and Chief Mentor of the Division of Clinical Research and Training at St John's Research Institute. He played a key role in establishing the Institute and the Clinical Research Division. His primary research interests are in cardiovascular disease (CVD), leading large multi-centric studies such as HOPE-3, CREATE, TIPS-3, and INTERSTROKE. He also co-chaired the ICRAG Program under the NHLBI–UnitedHealth Global Health Initiative, which included trials on primary and secondary CVD prevention and a national stroke registry.

Dr Pais has pioneered work on community health worker-based interventions for CVD control. He chairs the Scientific Advisory Group of the Division of Non-Communicable Diseases at ICMR and is a member of the ICMR Scientific Advisory Board and the Scientific Advisory Group of the National Centre for Disease Informatics and Research (ICMR), Bengaluru.

Dr Denis Xavier is Professor and Head of Pharmacology and Head of the Division of Clinical Research and Training. Trained at St. John's and McMaster University, he co-founded the Clinical Research Division in 1999 with Prof. Prem Pais. He has led or coordinated over 67 major studies, recruiting 160,000+ participants across 235 centres in India. These include landmark studies such as CREATE, HOPE-3, TIPS-3, OASIS 5 & 6, MANAGE, INTERSTROKE, SPREAD, PREPARE, INSPIRE, etc., addressing cardiovascular prevention, risk factors, and therapies involving polypills, anticoagulants, antiplatelets, and health worker-based interventions.

Dr Denis Xavier
Head, DCRT

He was Principal Investigator of the NIH-funded Centre of Excellence (2009–14) and led knowledge translation and stroke registry projects. Dr Xavier has trained over 2000 participants through 28 courses in research methods and biostatistics. He has 220+ publications in leading journals, serves on multiple ethics and advisory committees, and has an h-index of 78 with 94,500+ citations (Google Scholar). He was listed as the Stanford Top 2% Global Scientist for 2021 and 2024.

Dr Amarja Ashok Havaldar holds an MBBS, MD, DNB in Anaesthesiology, DM in Critical Care, and fellowships in Neuroanaesthesia (FNB) and Intensive Care (EDIC). She also earned a Postgraduate Diploma in Medical Law and Ethics (PGDMLE) from NLSIU.

Her areas of research include septic cardiomyopathy, echocardiography in weaning from mechanical ventilation, ARDS, ECMO, simulator-based training, and endothelial dysfunction. She has over 25 publications in national and international journals. Dr Havaldar was awarded the Hansraj Nayyar Award at Criticare 2016 and received the ICMR Young Faculty PhD Grant. In 2024, she secured an ethics committee grant for a quality improvement study focused on reducing discharge against medical advice (DAMA) from ICUs using the A3 methodological approach.

Dr Amarja Ashok Havaldar
Assoc. Professor,
Critical Care Medicine

Dr Arpana Iyengar
Professor, Paediatric Nephrology

Dr Arpana Iyengar is among the few professionals from low- and middle-income countries to earn a PhD in paediatric nephrology. Her research focuses on renal nutrition and chronic kidney disease. She has led cohort studies, randomised trials, and secured research grants.

Dr Iyengar is an Associate Editor of the Indian Journal of Nephrology and has authored multiple publications and books that support clinicians and trainees. She is recognised for her contributions to capacity building, educational collaborations, and patient care fundraising.

In leadership, Dr Iyengar has chaired the ISN Mentorship Program (2019–2024), led the ISN Clinical Research Program (2019–2023), and convened ISN Scientific Writing Courses for LMICs. She also mentors through the Clinician Scientist Academy (IPNA) and is a member of the steering committee for the Saving Young Lives program.

Dr Atiya Faruqui has been actively involved in a range of observational studies in cardiovascular diseases, peri-operative medicine, and COVID-related research. Her current research focuses on patients with chronic kidney disease, and she serves as the Principal Investigator on an ICMR–SRUM–NTF-funded project.

Dr Faruqui is committed to promoting ethical research practices and improving research methodology. She is a member of the Narayana Health Academic Ethics Committee, contributing to the oversight and review of clinical research proposals.

With a strong academic and clinical foundation, she supports interdisciplinary collaboration and evidence-based practice in medicine. Her research interests align with public health priorities, particularly in non-communicable diseases, and she continues to mentor students and early-career researchers in conducting ethically sound and methodologically robust studies.

Dr Atiya Faruqui
Professor, Pharmacology

Dr Deepa S
Senior Resident, DCRT

Dr Deepa Srinivasan is a public health physician and faculty member at the Division of Clinical Research and Training (DCRT) and a UCGHI GLOCAL fellow. She holds an MBBS from PSG Institute of Medical Sciences and a Master's in Community Health from St John's Medical College. She has further training in health economics, policy, and financing from the Public Health Foundation of India and healthcare costing from the George Institute for Global Health. Her research focuses on global cardiovascular health, policy, implementation science, and economic evaluations—particularly in low- and middle-income countries (LMICs).

As a Fogarty Fellow, she led the INTEGRATE study on adherence to cardiovascular treatment among tribal communities. She has contributed to major clinical trials, including ICRAG-2, and led DCRT's recognition as an ICMR Centre for Advanced Research and Collaborating Centre for Excellence. Her work emphasises equity, community-driven innovation, and real-world impact in LMICs.

Dr Deepak Y Kamath is an Early Career Fellow with the DBT/Wellcome Trust India Alliance. He earned his MD in Pharmacology from St. John's in 2011. His research interests include cardiovascular epidemiology, medication adherence in chronic diseases, primary CVD prevention, implementation research, and pharmacovigilance. He was the Project Officer for the NIH-funded SPREAD study, where he developed adherence strategies and trained community health workers.

As a Wellcome Trust fellow, he has designed and evaluated interventions to improve heart failure outcomes. He has contributed to trials such as the Heart Outcomes Prevention RCT and the PROGRESS study (2015–2018). In 2015, he was named a World Heart Federation Emerging Leader. Dr Kamath has published widely in reputed journals and authored three textbook chapters.

Dr Deepak Y Kamath
Assc. Professor
Pharmacology

Ms Freeda Xavier
Senior Program Manager
DCRT

Since 2001, Ms Freeda Xavier has coordinated over 25 large multi-centre randomised controlled trials, registries and observational and translational research studies. These include landmark global studies such as CREATE, OASIS 5–8, RIVAL, TIPS-1, TIPS-K, TIPS-3, HOPE-3, and POISE 1–3, which have influenced clinical practice. She has also coordinated CVD prevention studies like SPREAD and PROGRESS, funded by NIH and UK-MRC. She is currently managing the ACHIEVE follow-up study and the ACT COVID-19 study.

Over the past 20 years, she has worked with around 120 research sites across India, training investigators and staff. She plays a key role in international collaborations with institutions in Canada, the UK, and the USA, and engages with major funding agencies. Her strengths lie in regulatory affairs, clinical trial operations, monitoring, and preparing applications and budgets for national and international grants.

Dr Mangala Rao
Assc. Professor
Pharmacology

Dr Mangala Rao's research interests lie in cardiovascular medicine, peri-operative pharmacology, and rational drug use. She has served as Co-Investigator in a systematic review of all cardiovascular studies conducted in India and participated in the FRIENDS study, which examined cardiovascular disease management among primary care physicians.

Dr Rao has been involved in major multicenter international trials such as POISE-2, POISE-3, and the MANAGE study, which evaluated Dabigatran versus placebo in patients undergoing non-cardiac surgery. She is also a Co-Investigator in the ICMR-sponsored Rational Use of Medication study and the National COVID Registry. Beyond research, Dr Rao is passionate about advancing medical education and serves as a member of the Department of Medical Education at St. John's. Her contributions reflect a strong commitment to both research excellence and teaching.

Dr Merlyn Joseph also heads the Division of Occupational Health. She works closely with the garment and electronic manufacturing sectors and coordinates two service-based projects across multiple factories in India. Her research focuses on improving worker health and safety in these environments.

Dr Joseph has received several awards, including the prestigious GloCal Health Fellowship (2023) from Fogarty, NIH, for her study on migrant tea plantation workers and the Young Scientist Award from the Indian Association of Occupational Health (2016). A prolific academic, she has over 25 peer-reviewed publications in indexed journals. Her primary research interests include occupational health, migrant health, and non-communicable diseases. Through her work, she continues to contribute meaningfully to improving health outcomes among vulnerable and underserved worker populations in India.

Dr Merlyn Joseph
Asst. Professor,
Community Health

Ms Nandini Mathur coordinated several major multi-centre randomised controlled trials, registries, case-control, and observational studies, including PRoFESS, VITATOPS, ASPIRE, INTERSTROKE, IMPACT, MANAGE, FIGARO, STRIDE, PANACEA, and G-CHF, in collaboration with universities in Canada, Australia, and the USA. She also coordinated the NIH-funded INSPIRE stroke registry, which recruited over 11,000 patients from 61 sites across India. Nandini led the Health Research Methodology course in 2009 and supported the WIPRO GE Training for Engineers with the Anatomy department.

Ms Mathur has helped train clinicians and study coordinators under the Pfizer Preferred Research Centre program and coordinated the NIH-funded Training by Mentorship Program. Since 2021, she has been a consultant on the ENRICH-AF trial. Earlier, she worked with a Pune-based NGO documenting indigenous knowledge and ethnomedicine.

Ms Nandini Mathur
Senior Study Coordinator
DCRT

Dr Pranathi R
Asst. Professor, Physiology

A recipient of the President's Gold Medal for DNB and MD University Topper Award, Dr Pranathi R teaches medical physiology and leads research focused on diabetes prevention. Her postdoctoral work on a Wellcome Trust-funded study contributed to developing behaviour change interventions for prediabetes, highlighting her interest in lifestyle-based strategies for preventing non-communicable diseases. Her research on intramyocellular fat and sarcopenia in metabolic disorders has led to publications, conference presentations, and research grants.

Dr Pranathi provides clinical physiology services, including autonomic function testing and sarcopenia assessments. She is a recipient of the Young Research Scholar Award and APPI Award for Excellence in Clinical Physiology. Her long-term vision is to advance health equity by addressing cardiometabolic risks in underserved populations through targeted interventions.

Dr Padmini Devi
Professor, Pharmacology

Dr Padmini Devi has served as Co-Investigator on several important clinical and public health research studies. These include the MARS study, the Systematic Review of Hypertension and Coronary Artery Disease in Indians, the qualitative SPECTRUM study, the PROGRESS trial, the Heart Rescue Evaluation Program, the ICMR-sponsored Rational Use of Medication study, and the PREDICT project. Her current work includes serving as Co-Investigator in the ENRICH-AF trial.

Dr Devi's research interests span diabetes, cardiovascular diseases, and pharmacovigilance. Her involvement in both interventional and observational research reflects a deep commitment to improving the understanding and management of chronic diseases in India. She actively contributes to promoting rational use of medicines and improving cardiovascular care through her research and academic work.

Ms Preeti Girish has over 17 years of experience coordinating various activities related to large multicentre clinical trials and observational studies. She has contributed to the development of key study documents, including informed consent forms, standard operating procedures (SOPs), manuals of operations, regulatory documents, case report forms (CRFs), contracts, and CTRI registrations.
Ms Girish has assisted investigators with study setup activities, submissions to institutional ethics committees and regulatory bodies, budget preparation, and the organisation of investigator meetings and training sessions.

Ms Preeti Girish
Senior Study Coordinator
DCRT

Dr Priya Sreedaran
Professor, Psychiatry

Dr Priya Sreedaran's research focuses on suicide prevention, mental health education and common and severe mental disorders with comorbid medical conditions and tobacco cessation.
Dr Priya has completed a randomised controlled trial in implementation research in suicide prevention and an ICR-funded task force project on the development of the scale. Dr Priya is also a mentor to other young aspiring researchers in the field of mental health.

Dr Priya Pais is a Diplomate of the American Board of Paediatrics and Paediatric Nephrology, and holds an MSc in Clinical Investigation from Northwestern University, Chicago. Her research focuses on hypertension in chronic kidney disease (CKD) and kidney transplant, ambulatory blood pressure monitoring, and clinical ethics, with a particular interest in health economics and equitable access to kidney care.

Dr Pais is a co-investigator in an ICMR study on normative ABPM data in Indian children. She chairs the Outreach Committee of the International Paediatric Transplant Association, is a member of the International Paediatric Nephrology Association Sister Centre Committee, convenes the Hospital Ethics Committee, and is a founding member of ARK (Alliance of Rare Kidneys) with ORDI.

Dr Priya Pais
Head, Paediatric Nephrology

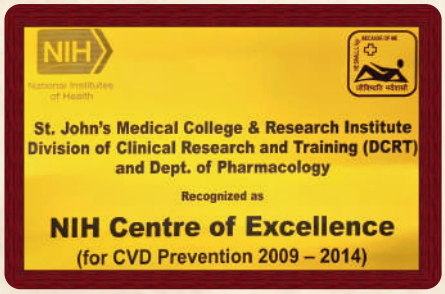
Dr Suhas Chandran
Assoc. Professor, Psychiatry

Dr Suhas Chandran heads the Child and Adolescent Unit at the Department of Psychiatry. He is an adjunct faculty member at the Centre for Advanced Research and Excellence in Autism and Developmental Disorders (CAREADD), where he leads programs in autism, including gut microbiome research and the Teenager-Young Adult Autism Program. He mentors psychiatry and paediatric residents, post-doctoral fellows, and MSc Nursing students. He has published 91 peer-reviewed articles, nine book chapters, and 8 edited books.

Dr Chandran's research focuses on autism interventions, adolescent eating disorders, school mental health, the gut-brain axis, grief, and gender identity. He is a recipient of the 2023 Early Career Award from WASP and RCPsych (UK), the Donald J. Cohen Fellowship (2024), and the Advanced In-Country Research Award from the University of Pittsburgh and NIMH. He is an active member of IACAPAP and WASP, contributing globally to child mental health research and education.

Key Recognition and Grants

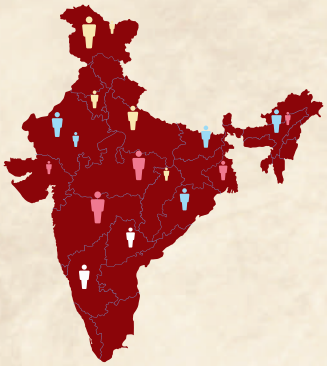
NIH –Centre of Excellence



The National Institutes of Health (NIH), USA, has recognised us as a Centre of Excellence for the prevention and control of chronic disease (2009-2014).

Over five years, we conducted three large multi-centre knowledge translation studies. This included primary (PREPARE) and secondary (SPREAD) prevention of ischemic heart disease and an observational study in strokes (INSPIRE). Dr Denis Xavier was the Principal Investigator.

Indian Council of Medical Research Centre for Advanced Research



We were awarded a prestigious grant from the Indian Council of Medical Research (ICMR) to address cardiovascular diseases across diverse populations in India.

The five-year program encompasses three components. The first formative research includes a comprehensive systematic review, a cross-sectional study conducted at 40 sites across approximately 22 states in India, and a qualitative study at four distinct regions of India.

The cross-sectional study includes policymakers, healthcare professionals from various care levels, and patients with caregivers. A qualitative study will further explore their challenges and gather suggestions to improve access to optimal care. The systematic review, cross-sectional study, and qualitative research results will be synthesised, focusing on non-physician health workers, rational fixed-dose combinations, and simple mobile health strategies.

A two-step Delphi process enables identifying and refining interventions to reduce cardiovascular diseases. These interventions will be evaluated in a robust cluster randomised trial named ENABLE at 26 clusters across 13 different states of India.

Indian Council of Medical Research Collaborating Centre of Excellence

Our group has recently been recognised as an ICMR Collaborating Center of Excellence, one of 20 centres in India, to receive this honour in recognition of our three decades of work in cardiovascular disease prevention.

The Director General of the ICMR mentioned that this is the highest honour biomedical scientists in India can get from the ICMR. Our mandate is to conduct high-quality collaborative research and train individuals and institutions nationwide for better health.

WHO Global Clinical Trials Forum

We are now a part of the WHO Global Clinical Trials Forum. The network seeks to improve the clinical trial environment and infrastructure at national, regional and global levels in line with WHO guidance.

Dr Denis Xavier was invited to the World Health Organization (WHO) Global Clinical Trials Forum (GCTF) to participate in a two-day deliberative session focused on adopting the recently released WHO guidelines on clinical trials on 2 and 3 April 2025.

GCTF
Global clinical trials forum
WHO Managed Network

The GCTF is a World Health Organization (WHO) managed network. The network aims to enable activities of partners for implementation of WHO's guidance on best practices for clinical trials, guidance developed at the request of World Health Assembly resolution WHA 75.8. A Global Action Plan for Clinical Trial Ecosystem Strengthening re-articulates the WHO guidance in the form of key actions for implementation.

World Heart Federation Emerging leaders Meeting 2016

We organised the third World Heart Federation Emerging Leaders (WHFEL) think tank seminar, which was held on March 14-18, 2016, at St John's Research Institute, Bangalore, India. It included 25 Emerging Leaders (ELs) from 16 countries (Cameroon, Nigeria, Romania, India, Ukraine, Russia, the United Kingdom, the United States of America, Jamaica, Philippines, Poland, Uganda, Tanzania, New Zealand, Mauritius, Canada) and 11 faculty from 6 countries (Switzerland, India, United States of America, United Kingdom, Uruguay, Canada).

The ELs came from diverse backgrounds, including working as academic and clinical cardiologists, primary care physicians, epidemiologists, and public health advocates. The seminar's overarching theme was Tobacco Control for Cardiovascular Disease Prevention, which, in turn, will reduce premature deaths due to heart diseases by 25% by 2025 (WHO 25 by 25 goal). The conference focuses on three strategies to control tobacco use. They are research, policy and health system changes.

Our Capacity for Clinical Research

Large network of clinical investigators about **235 sites** across the country and about __ investigators

Team of trained & experienced coordinators and research assistants, **about 50** at St John's and many across the country

Capacity to coordinate large multicentre global clinical trials

National and International regulatory approval

Investigational Product- Importation, storage, redistribution and accounting

A State of the Art Storage facility which is access controlled and temperature controlled to store Clinical Trial Supplies.

Biorepository

A biorepository for long-term storage of biological samples. It can store 80,000 samples.


Drugs Import, Storage and Distribution

We also have a Trial Drug Storage Unit, which is access-controlled and temperature-controlled to store Clinical Trial Supplies

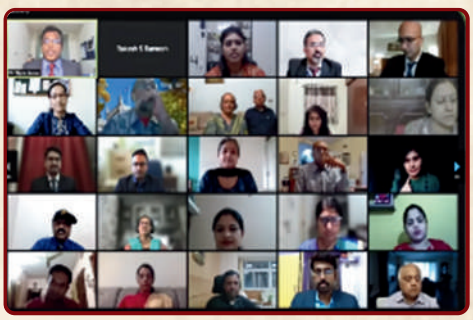
Trial Drug Storage Unit

Training and Capacity Building

For 16 years, we have been offering courses and workshops on clinical research methods for faculty, postgraduate students in medical colleges, personnel in government agencies, ethics committees, and industry professionals. So far, we have conducted 31 programs with approximately 2,900 participants from 83 institutions across 45 cities and 12 countries. DCRT has received support and encouragement from various sources.

First Health Research Method Evidence-Based Medicine (HRM EBM) Course, 2009

10th HRM EBM Course, 2019



First Randomised Controlled Trial (RCT) Course, 2021

4th RCT Course, 2024

16th HRM EBM Course, 2025

Undergraduate Research Mentorship

At DCRT, we are committed to fostering the next generation of researchers through dedicated mentorship and hands-on learning. Our Undergraduate Research Project Mentorship programme provides students with the opportunity to engage in meaningful research under the guidance of experienced faculty.

Since 2022, we have supported undergraduate students in pursuing research through dedicated mentorship and competitive grant funding. Of the 12 applications that were awarded grant funding, eight promising projects availed the grants and were nurtured under the close guidance of experienced mentors.

Glimpses of UG Research Conclave 2025

80 Project groups mentored and ongoing

Beginning in 2025, this initiative has been renamed the Pais-Yusuf Undergraduate Research Grant—in honour of Dr Prem Pais and Dr Salim Yusuf, pioneers of clinical research at St John's. The grant amount is Rs 25,000 and up to 20 projects receive this grant.

Major Research Publications

We have a strong track record of impactful research, with over 300 publications in leading peer-reviewed medical journals including The Lancet, New England Journal of Medicine (NEJM), JAMA, Circulation, and European Heart Journal. These publications reflect our commitment to advancing clinical science in areas such as cardiovascular disease, stroke, chronic disease prevention, health systems research, and implementation science.

Below are some of our most noteworthy publications, each accessible through the accompanying QR code for quick reference and further reading.

CREATE

Treatment and outcomes of acute coronary syndromes in India (CREATE): a prospective analysis of registry data

Denis Xavier, Prem Pais, P J Devereaux, Changchun Xie, D Prabhakaran, K Srinath Reddy, Rajeev Gupta, Prashant Joshi, Prafulla Kerkar, S Thanikachalam, K K Haridas, T M Jaison, Sudhir Naik, A K Maity, Salim Yusuf, on behalf of the CREATE registry investigators*

Summary

Background India has the highest burden of acute coronary syndromes in the world, yet little is known about the treatments and outcomes of these diseases. We aimed to document the characteristics, treatments, and outcomes of patients with acute coronary syndromes who were admitted to hospitals in India.

Methods We did a prospective registry study in 89 centres from 10 regions and 50 cities in India. Eligible patients had suspected acute myocardial infarction with definite electrocardiograph changes (whether elevated ST [STEMI] or non-STEMI or unstable angina), or had suspected myocardial infarction without ECG changes but with prior evidence of ischaemic heart disease. We recorded a range of clinical outcomes, and all-cause mortality at 30 days.

Findings We enrolled 20 937 patients. Of the 20 468 patients who were given a definite diagnosis, 12 405 (60·6%) had STEMI. The mean age of these patients was 57·5 (SD 12·1) years; patients with STEMI were younger (56·3 [12·1] years)

INSPIRE

Characteristics, clinical practice patterns, and outcomes of strokes in India: INSPIRE—A multicentre prospective study

Denis Xavier[1], Robert Murphy[2], Prem Pais[3], Jeyaraj Pandian[4], Sarma Gosala[1], Nandini Mathur[3], Dheeraj Khurana[5], R Sundararajan[6], Rajeev Gupta[7], Rajnish Joshi[8], Somesh Vanchilingam[9], PN Venkatarathanamma[10], Soaham Desai[11], Catriona Reddin[2], Martin O'Donnell[2,12] and Salim Yusuf[12]

INTERHEART

Effect of potentially modifiable risk factors associated with myocardial infarction in 52 countries (the INTERHEART study): case-control study

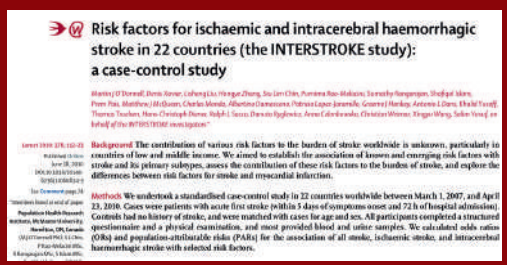
Summary

Background Although more than 80% of the global burden of cardiovascular disease occurs in low-income and middle-income countries, knowledge of the importance of risk factors is largely derived from developed countries. Therefore, the effect of such factors on risk of coronary heart disease in most regions of the world is unknown.

Methods We established a standardised case-control study of acute myocardial infarction in 52 countries, representing every inhabited continent. 15 152 cases and 14 820 controls were enrolled. The relation of smoking, history of hypertension or diabetes, waist/hip ratio, dietary patterns, physical activity, consumption of alcohol, blood apolipoproteins (Apo), and psychosocial factors to myocardial infarction are reported here. Odds ratios and their 99% CIs for the association of risk factors to myocardial infarction and their population attributable risks (PAR) were calculated.

Findings Smoking (odds ratio 2·87 for current vs never, PAR 35·7% for current and former vs never), raised

INTERSTROKE

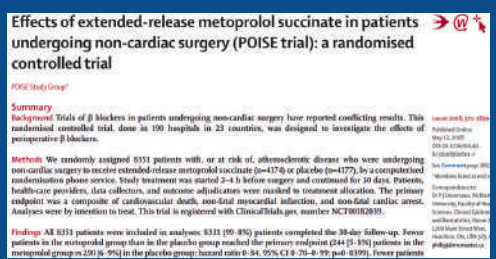


Risk factors for ischaemic and intracerebral haemorrhagic stroke in 22 countries (the INTERSTROKE study): a case-control study

Background The contribution of various risk factors to the burden of stroke worldwide is unknown, particularly in countries of low and middle income. We aimed to establish the association of known and emerging risk factors with stroke and its primary subtypes, assess the contribution of these risk factors to the burden of stroke, and explore the differences between risk factors for stroke and myocardial infarction.

Methods We undertook a standardised case-control study in 22 countries worldwide between March 1, 2007, and April 23, 2010. Cases were patients with acute first stroke (within 5 days of symptoms onset and 72 h of hospital admission). Controls had no history of stroke, and were matched with cases for age and sex. All participants completed a structured questionnaire and a physical examination, and most provided blood and urine samples. We calculated odds ratios (ORs) and population-attributable risks (PARs) for the association of all stroke, ischaemic stroke, and intracerebral haemorrhagic stroke with selected risk factors.

POISE 1



Effects of extended-release metoprolol succinate in patients undergoing non-cardiac surgery (POISE trial): a randomised controlled trial

Summary

Background Trials of β blockers in patients undergoing non-cardiac surgery have reported conflicting results. This randomised controlled trial, done in 190 hospitals in 23 countries, was designed to investigate the effects of perioperative β blockers.

Methods We randomly assigned 8351 patients with, or at risk of, atherosclerotic disease who were undergoing non-cardiac surgery to receive extended-release metoprolol succinate (n=4174) or placebo (n=4177), by a computerised randomisation phone service. Study treatment was started 2–4 h before surgery and continued for 30 days. Patients, health-care providers, data collectors, and outcome adjudicators were masked to treatment allocation. The primary endpoint was a composite of cardiovascular death, non-fatal myocardial infarction, and non-fatal cardiac arrest. Analyses were by intention to treat. This trial is registered with ClinicalTrials.gov, number NCT00182039.

Findings All 8351 patients were included in analysis: 8331 (99·8%) patients completed the 30-day follow-up. Fewer patients in the metoprolol group than in the placebo group reached the primary endpoint (244 [5·8%] patients in the metoprolol group vs 290 [6·9%] in the placebo group; hazard ratio 0·84, 95% CI 0·70–0·99; p=0·0393). Fewer patients

INSPIRE

Research

International Journal of Stroke WSO

Characteristics, clinical practice patterns, and outcomes of strokes in India: INSPIRE—A multicentre prospective study

Sage

Denis Xavier[1], Robert Murphy[2], Prem Pais[3], Jeyaraj Pandian[4], Sarma Gosala[1], Nandini Mathur[3], Dheeraj Khurana[5], R Sundararajan[6], Rajeev Gupta[7], Rajnish Joshi[8], Somesh Vanchilingam[9], PN Venkatarathanamma[10], Soaham Desai[11], Catriona Reddin[2], Martin O'Donnell[2,12] and Salim Yusuf[12]

PREPARE

Rationale and design of the Primary pREvention strategies at the community level to Promote Adherence of treatments to pREvent cardiovascular diseases trial number (CTRI/2012/09/002981)

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RELY

Circulation

EPIDEMIOLOGY AND PREVENTION

Variations in Cause and Management of Atrial Fibrillation in a Prospective Registry of 15 400 Emergency Department Patients in 46 Countries

The RE-LY Atrial Fibrillation Registry

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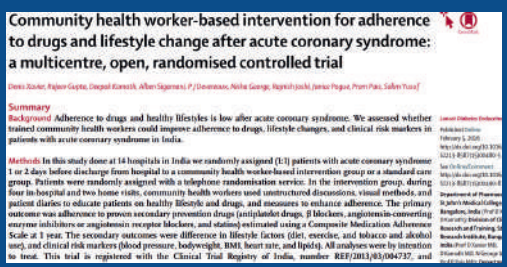
SPREAD



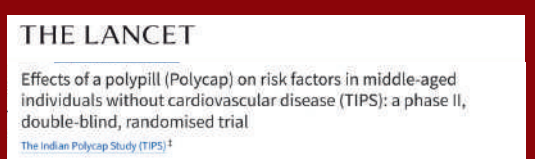
Community health worker-based intervention for adherence to drugs and lifestyle change after acute coronary syndrome: a multicentre, open, randomised controlled trial

Summary

Background Adherence to drugs and healthy lifestyles is low after acute coronary syndrome. We assessed whether trained community health workers could improve adherence to drugs, lifestyle changes, and clinical risk markers in patients with acute coronary syndrome in India.

Methods In this study done at 14 hospitals in India we randomly assigned (1:1) patients with acute coronary syndrome 1 or 2 days before discharge from hospital to a community health worker-based intervention group or a standard care group. Patients were randomly assigned with a telephone randomisation service. In the intervention group, during four in-hospital and two home visits, community health workers used unstructured discussions, visual methods, and patient diaries to educate patients on healthy lifestyle and drugs, and measures to enhance adherence. The primary outcome was adherence to proven secondary prevention drugs (antiplatelet drugs, β blockers, angiotensin-converting enzyme inhibitors or angiotensin receptor blockers, and statins) estimated using a Composite Medication Adherence Scale at 1 year. The secondary outcomes were difference in lifestyle factors (diet, exercise, and tobacco and alcohol use), and clinical risk markers (blood pressure, bodyweight, BMI, heart rate, and lipids). All analyses were by intention to treat. This trial is registered with the Clinical Trial Registry of India, number REF/2013/03/004737, and

TIPS 1 (POLYPILL)



THE LANCET

Effects of a polypill (Polycap) on risk factors in middle-aged individuals without cardiovascular disease (TIPS): a phase II, double-blind, randomised trial

The Indian Polycap Study (TIPS)[‡]