



The
George
Institute
for Global Health **India**

Annual Report 12–13



THE GEORGE INSTITUTE for Global Health INDIA

The George Institute is ranked among the top 10 research institutions in the world for scientific impact by the **SCImago Institutions Rankings (SIR) World Reports** in 2011, 2012 & 2013.

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Executive Director's report

Sustainable healthcare for the 21st century requires us to think big and challenge existing ways of delivering healthcare.

The year 2012-13 was a year of considerable growth and success for The George Institute, India. We continued the focus on our research strategy with both "discovery" as well as "implementation" components. The key themes continued to be innovative models of clinical health care and multi-sectoral approaches to improving health. In addition, our strategic approach on improving the health of adolescents is also getting formulated.

The major new activity was the pilot-testing of the *Systematic Medical Appraisal, Referral and Treatment* project, or SMARTHealth, which focuses on the development of smartphone applications and clinical processes of care that enable rural village community healthcare workers and primary healthcare centre doctors to support the delivery of evidence-based healthcare in resource-poor environments. The pilot conducted in 10 villages involving 3 doctors and 10 ASHA workers, or Accredited Social Health Activists, was well received and we are now gearing up to launch a full-fledged research project

An important milestone has been the completion of the UMPIRE trial – a study evaluating the effectiveness of a "polypill-based strategy" for improving the long-term of health of people with cardiovascular diseases by improving adherence to treatment and reducing the likelihood of side-effects.

The soon-to-be-launched ATTEND trial will focus on rehabilitation of stroke survivors by making family members participants in care, thus considerably bringing down the cost of after-stroke care and making it simpler to deliver. The findings of the project which would follow 1200 stroke survivors in 12 centres across the country would be presented at the World Stroke Congress in 2016.

This year has also brought success in attracting research funding for a number of new projects covering a range of topics from understanding how best to reduce the salt intake in Indian diets, to a new trial to test the effectiveness of corticosteroid therapy in IgA nephropathy.

None of this would be possible without an extensive network of national and international collaborating partners, and without the willingness of thousands of individuals and hundreds of communities to volunteer for participation in our research activities.

We are immensely grateful for this and in turn, renew our commitment to conduct research responsive to the health needs of our communities. We hope that this will directly impact on the quantity and quality of the lives of millions of people throughout India.

I hope you enjoy reading this report.

Vivekanand Jha

Professor Vivekanand Jha
Executive Director,
The George Institute for Global Health, India



Our mission

Our mission is to improve the health of millions of people worldwide.

We will achieve this by:

- Providing the best evidence to guide critical health decisions
- Targeting global epidemics, particularly chronic disease and injury
- Engaging with decision makers to enact real change
- Focusing on vulnerable populations in both rich and poor countries

The George Institute for Global Health is a **global, not-for-profit organisation** located in Australia, China, India and the United Kingdom. We are a registered charity in Australia and the United Kingdom. In India, we are registered under Section 25 of the Companies Act.

Our values

Our **humanitarian commitment** will spur us to tackle the health issues affecting high-risk and disadvantaged people worldwide.

Our **focus on excellence** will produce scientific evidence that is ethical and of the highest quality.

Our **creativity** will challenge traditional thinking and provide an impetus for new and innovative solutions to the world's leading health problems.

Our **integrity** will underpin all our work and interactions, including our collaborations with partner organisations worldwide.

Our **'can do' approach** will produce timely, effective action, even in the face of adversity or other barriers to implementation.

Our **emphasis on impact** will ensure our work has real consequences for those who are most vulnerable to disease and injury.

Our partners

Partnerships with institutions, organisations and individuals sharing our vision, allow us to extend our reach in rich and poor countries alike. Through these partnerships, we draw on a wide range of expertise to develop and implement activities to address global and regional health issues.

The George Institute India has collaborations with over sixty national and international institutions as well as strong ties within our global offices in Australia, China and the United Kingdom.

Indian Council of Medical Research (ICMR)

A partnership between ICMR, The University of Sydney and The George Institute to promote research collaboration relating to the prevention of injury and childhood obesity.



Public Health Foundation of India (PHFI)

PHFI and TGI India will promote collaborative research and capacity development activities. Initial joint activities focus on urban health and disability due to chronic diseases and injury.



University of Hyderabad

This academic and research partnership will increase public health research capacity through training of students and researchers, and develop collaborative public health projects.



Our global affiliations



The George Institute India

Directors & Senior Academics

The George Institute, India is proud to boast some of India’s finest health and medical researchers as members of its Research Advisory Committee (RAC) – an independent body that provides high-level research recommendations. Meeting in Hyderabad last year, the RAC provided positive feedback on the 2012-13 research program in India.

The committee appreciated the growth of the Institute and its involvement in quality research. While acknowledging the steps taken by the institute to improve its profile in India and facilitate research capacity development, they stressed further leveraging local funding opportunities and increasing the national profile of the Institute. Setting up of a new office in New Delhi was noted as a very important step that would benefit the institute in the long run, by the committee.

The portfolio of research at The George Institute, India has grown considerably since the Institute was set up in 2007. Currently, there are 10 major studies underway in injury prevention and chronic disease with particular focus on innovative ways to delivery healthcare solutions, particularly in disadvantaged populations.

Professor Vivekanand Jha (1)

Executive Director,
The George Institute for Global Health, India

James Martin Fellow,
The George Institute for Global Health,
University of Oxford

Professor Vivekanand Jha is the Executive Director, The George Institute for Global Health, India, and James Martin Fellow at The George Institute for Global health at the University of Oxford.

Prior to joining The George Institute, he was Professor of Nephrology and Head, Department of Translational Regenerative Medicine and Officer-In-Charge, Medical Education and Research Cell at the Postgraduate Institute of Medical Education and Research in Chandigarh, India. Vivek serves on the international advisory boards of several organisations, including membership of the WHO Expert Advisory Panel on Human Cell, Tissue and Organ Transplantation, and the executive committee of the International Society of Nephrology.

He is a councillor of the International Society of Nephrology, a member of the education committees for the International Transplantation Society and International Society of Peritoneal Dialysis. He is a physician with a specialisation in the area of kidney diseases and he focuses on emerging public health threats globally and in India. He is particularly interested in using multi-disciplinary approaches and innovation to address the major challenge posed to humanity by non-communicable diseases.

Professor Anushka Patel (2)

Chief Scientist,
The George Institute for Global Health

Executive Director,
The George Institute for Global Health, India
(Until April 2013)

Anushka is a Professor of Medicine at the University of Sydney and a cardiologist at Royal Prince Alfred Hospital (Sydney). She undertook her medical training at the University of Queensland, and gained postgraduate research degrees from Harvard University and the University of Sydney. As the Chief Scientist of The George Institute, she plays a key role in developing and supporting global strategic initiatives. Her research focuses on developing innovative solutions for delivering affordable and effective cardiovascular care in the community and in acute-care hospital settings. Anushka currently leads research projects relating to these interests in Australia, China and India. She is supported by a Senior Research Fellowship from the NHMRC.

Dr Pallab K. Maulik (3)

Deputy Director and Head of Research and Development, George Institute, India

Senior Research Associate, George Institute for Global Health, Oxford University

Pallab K. Maulik joined The George Institute, India as the Head of Research and Development in early 2010. Dr. Maulik brings a wealth of experience to the Institute, in particular expertise in mental health.

Dr. Maulik has worked with the World Health Organisation (WHO), Geneva on Project Atlas and other mental health programs, and clinically as a psychiatrist in India and Australia. After training as a psychiatrist at the All India Institute of Medical Sciences, New Delhi, Dr. Maulik received training in public health at the London School of Hygiene and Tropical Medicine, as well as Johns Hopkins School of Public Health where he studied his Masters and Doctoral training. He is a Wellcome Trust-DBT India Alliance Intermediate Career Fellow.

His particular research interests include social determinants of health, especially mental health services, mental disorders, international mental health, and intellectual disability.

Amit Khanna (4)

Director, Finance and Operations,
The George Institute for Global Health, India

Amit joined the George Institute for Global Health, India in May 2013 as Director of Finance and Operations. Prior to joining our team, he worked in the services industry with companies providing services such as auditing and consulting, shipping and logistics, online classifieds/advertising, internet and technology based solutions.

He instantly connected with George Institute’s mission and values and is very passionate about being instrumental in driving policy changes in India. Amit holds a degree in Commerce from Delhi University and is a member of the Institute of Chartered Accountants of India.

Members of the Research Advisory Committee include:

Dr. G Gururaj

National Institute of Mental Health & Neurosciences, Bangalore

Dr. Rajesh Kumar

Postgraduate Institute of Medical Education and Research, Chandigarh

Dr. Ramanadham Madduri

University of Hyderabad, Hyderabad

Dr Jeyaraj Durai Pandian

Christian Medical College, Ludhiana

Dr. M Shiva Prakash

National Institute Of Nutrition, Hyderabad

Dr. KR Thankappan

Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum

Dr. R Thara

Schizophrenia Research Foundation, Chennai

Dr CS Yajnik

King Edward Memorial Hospital, Pune



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our **research** **areas**

The research strategy for The George Institute for Global Health (GIGH) India is organized around three main themes:

- Innovative models of clinical health care
- Health of adolescents
- Multisectoral approaches to improving health

Innovative Models of Clinical Healthcare

This theme would include research projects that focus on clinical conditions, but have both a “discovery” and “implementation” research focus at the same time. The overall objective of the projects would be to undertake research that involves using new technologies or research methodology that informs health care delivery and makes it more efficient and also equitable.

We work in the area of cardio-vascular disorders, psychiatric disorders, neurological disorders, nephrological disorders and injuries.

Health of Adolescents

This theme will focus on adolescent health related projects that would have both a “discovery” and “implementation” research component. The discovery component would include estimates of burden of disease, whereas the implementation component will focus on interventions. Epidemiology will be the key strength of this theme. This does not focus on any one specific health condition.

Multisectoral approaches to improving health

This theme will focus on research that would largely depend on multi-sectoral approaches involving different health and non-health sectors. The main focus is on “implementation” research, with the objective of developing policies and programmes applicable at local, regional, or national levels. Health economics, policy development, and qualitative research will be key methodological areas involved in this theme.



We aim to make health care delivery
more efficient and equitable



“We get **the information** we need to tell people from the tablet...”



AT A GLANCE

- More than 15,000 individuals from 54 villages, across 18 primary healthcare centres in India
- Providing excellent, affordable primary healthcare for disadvantaged communities worldwide
- The trial will assess whether the SMARTHealth strategy will lower cardiovascular disease risk in a high-risk population

SMARTHealth India:

Getting smart about healthcare

Background and goals:

Hypertension related disease affected 118 million people in India in the year 2000; this figure will double by 2025. Previous studies from rural India have found that 1 in 4 adults suffer from hypertension and very few are achieving adequate blood pressure (BP) control. The current health system infrastructure is grossly under-resourced to meet these gaps in care leading to massive unmet demand and placing considerable strain on primary healthcare resources and consequently on the quality of care provided.

SMARTHealth India stands for Systematic Medical Appraisal, Referral and Treatment in India and is an innovative strategy that has been created specifically to provide a healthcare “ecosystem” that will improve primary healthcare for those at highest risk of cardiovascular disease (CVD) in resource-limited settings. The current study is aimed to investigate the effectiveness of this innovative and multi-disciplinary program addressing BP control in rural India.

Study method:

This program will be evaluated in a stepped-wedge, cluster, randomized controlled trial in 54 villages of rural Andhra Pradesh over a period of two years where every six months the study participants will move from the control group into the trial group. The study population will be adults aged 40 years and above at high CVD risk based on World Health Organisation/International Society for Hypertension risk prediction charts. The intervention will comprise a Clinical Decision Support Systems (CDSS) for use by the health workers to identify, refer and provide non-pharmacological management.

Current status/Previous study reports:

A pilot was conducted in 10 villages of Andhra Pradesh involving 10 ASHAs and 3 doctors in December 2012 to test the acceptability, feasibility and preliminary effectiveness of the intervention. The findings from this study have informed the design of the intervention starting in mid 2014 for a period of 2 years.

Funding source and collaborators

This work is supported by a National Health and Medical Research Council Global Alliances for Chronic Disease Grant. The key institutions involved are The George Institute for Global Health, Centre for Chronic Disease Control, and Centre for Doctoral Training in Healthcare Innovation, University of Oxford.

Case study/human interest story

All the three end users—ASHAs, Doctor and community participants felt during the pilot that this application is very comprehensive in screening people for their CVD risk as well as educating them. ASHAs also felt it very convenient to use with all the information readily available to them through the tablet.

“We get the information that we need to tell people from the tablet ... We need not write any information...I liked this aspect very much” (ASHA worker, 32 years)

The doctors from PHCs also felt the system is very useful to calculate and communicate risk to the patients.

“It’s wonderful. I got better results than I expected....If patients see the risk bar, they understand very well that they have a high risk of CVD.... We gained knowledge from this percentage display too...” - Dr. G. V. Sudhakar

TRIUMPH: Triple pill for Hypertension

Background and goals:

India has high prevalence of hypertension and evidence has shown that awareness and control of hypertension is relatively poor even amongst those who are well educated and have access to screening programs.

Traditionally, the recommended way to treat hypertension is to start with many visits to doctor, which can be costly and time consuming for both doctor and patient. Most patients with hypertension will need two or more blood pressure (BP) lowering medications to control their BP. There is good evidence to suggest that starting patients directly on a triple combination treatment (i.e. three medications combined into one) with the included medications at low doses might achieve the BP lowering effects of a two in one full strength medication but with even less side effects.

Study method

TRIUMPH study is a randomised controlled trial that will recruit 700 participants with mild to moderate hypertension from about 20 hospitals in India. It will test whether provision of a Triple Pill compared to usual care improves blood pressure (BP) control at 6 months. The main trial will be complemented by economic and process evaluation.

Current status

The study has been approved by 16 out of 20 participating trial site ethics committees and is under DCGI and HMSC review.

Funding source and collaborators

This work is supported by a funding award made by the Global Alliance for Chronic Disease through the National Health and Medical Research Council of Australia. The George Institute works in collaboration with the Centre for Chronic Disease Control, New Delhi.

AT A GLANCE

- Randomised control trial with 700 participants across 20 hospitals
- Starts patients on a triple combination treatment or polypill
- Funded by Global Alliance for Chronic Disease through NHMRC, Australia

A switch to polypills may improve outcomes over regular medications



A landmark for stroke rehabilitation

ATTEND:

Family-led rehabilitation after Stroke in India

Background and goals:

Globally, some 87 per cent stroke occurs in low- and middle-income countries like India with many people having no access to stroke rehabilitation. Annual estimated stroke incidence in India is 135 to 145 per 100,000, with early case fatality rates ranging from 27% to 41%. This equates to ~1.5 million people having a stroke each year, leading to a further 500,000 people, each year, living with stroke-related disability.

Western models of stroke rehabilitation are currently unaffordable and are likely to remain so for some decades. The primary aim of the study is to determine whether stroke recovery at home given by a trained family member is an effective, affordable strategy for those with disabling stroke in India when compared to usual care.

Study method

ATTEND is a multicentre, randomised, blinded outcome assessor, controlled trial. The study aims to enrol over 1200 patients with mild to moderate disability across India.

Current status

Following the launch meeting for the study in October 2013, it has been initiated at two centres viz. All India Institute of Medical Sciences, New Delhi and Christian Medical College, Ludhiana.

Funding source and collaborators

The study is funded by National Health and Medical Research Council (NHMRC), Australia.

Collaborators

Christian Medical College, Ludhiana is the clinical coordination center for the study, Public Health Foundation of India will be undertaking monitoring and policy dissemination, George Institute for Global Health, India is responsible for data management and overall project management and other collaborators from UK.

ATT A GLANCE

- 1,200 patients enrolled across 10 centres
- Determining whether stroke recovery at home by a trained family member is effective
- Aims to bring down the cost of after-stroke rehabilitation
- Christian Medical College, Ludhiana the co-ordinating lead

TESTING: Therapeutic Evaluation of Steroids in IgA Nephropathy Global study

Background and goals:

The TESTING trial will provide clear and definitive evidence regarding the benefits and harms of an extremely promising treatment (immunosuppression with steroids) for individuals with Immunoglobulin A Nephropathy (IgAN) at high risk of kidney failure. IgAN, an immunological disorder affecting the kidneys, is the most common glomerulonephritis worldwide. Accumulating data suggests that a course of steroid therapy may have a powerful protective effect in IgAN, but to date this has not been tested in an appropriately powered randomized trial. As a result, steroids are rarely used for IgAN in most countries including India.

The specific aim of the TESTING study is to test the hypothesis that treatment with oral methylprednisolone will reduce the long-term risk of kidney failure in people with high risk IgAN.

Study method

The study will involve a large-scale multi-centre, double-blind, placebo-controlled, randomized clinical trial designed and adequately powered to define the effects of methylprednisolone on the risk of kidney failure.

All patients with a biopsy diagnosis of IgA nephropathy will be started on standard therapy with ACE inhibitors, and for controlling blood pressure and lipids and will be followed up for 6 months to see if they continue to be in the high risk category as determined by proteinuria and GFR. At this point, they will be randomized to receive a 6-month course of methylprednisolone or matching placebo. Patients will then be followed up to see whether they will develop any of the end points as listed above.

The study aims to enroll 400 patients in India and will be overseen by an international Steering Committee and an independent Data Safety Monitoring Board.

Funding source and collaborators

NHMRC (Australia). Funding is also being requested from the ICMR.

Finding an **effective treatment** for the most common glomerular disease

AT A GLANCE

- IgA nephropathy is the commonest glomerular disease worldwide
- A subset of patients develop end stage kidney failure
- Optimal treatment of these patients is not known
- This global study will provide the definitive answer to whether corticosteroids prevent the development of progressive kidney failure in patients with IgA nephropathy
- More than 20 centres from all cross India will participate in the study



Paving the way for a national care pathway for the elderly

Management of Hip Fractures in Older People in India

Background and goals:

By 2020, almost 20% of the Indian population will be older than 60 years, and the annual incidence of hip fractures will reach 600,000. Based on current mortality data, an estimated 40% of these individuals will die within a year. The introduction of integrated pathways of care for the management of hip fractures in Sweden and the UK has demonstrated significant reductions in mortality, length of hospital stay and cost.

These care pathways comprise fast track admission to an orthopaedic ward, combined geriatric and orthopaedic care, early surgery, prevention of pressure sores, and treatment for osteoporosis and falls assessment. Currently little is known about the pathways of care and outcomes for hip fracture in India.

The proposed project will facilitate the development of evidence based strategies to improve the management and outcomes of hip fractures in India. Collaboration is being sought from orthopaedic surgeons, geriatricians/specialist physicians, anaesthetists, nurses, rehabilitation specialists and hospital managers involved in the care of the older people, to contribute to this proposed study.

Study method

A pilot study is proposed initially to assess the feasibility of conducting a larger prospective cohort study. The pilot will be conducted in three hospitals in Delhi (one major teaching hospital, one private and one general hospital).

The main study will involve hospitals in a number of States ranging from those with high per capita incomes to those with low per capita incomes. Samples of urban and rural hospitals, as well as government and private care providers, will be included.

It is intended that the findings from the larger study will facilitate the identification of interventions that can be incorporated into practice in a national 'Care Pathway'. A likely outcome will be the establishment of an Indian Hip Fracture Registry/Database.

Current status

Multidisciplinary groups of care providers in two participating centres in Delhi (AIIMS and JPN Trauma Centre, GTB Hospital and Medical College) have been identified and the proposal discussed with them prior to ethics application.

Patients will be recruited from these three hospitals over a period of three months and vital information on socio-demographic characteristics, clinical condition, care and treatment collected during their stay at hospital. The study will also collect information on provision of care from these selected hospitals.

AT A GLANCE

- India will witness growth in elderly population in coming years
- Hip fractures are one of the major cause of disability among the elderly; more than 600,000 such fractures occur annually in India
- A model of care providing comprehensive health services to the elderly is imperative
- Multi-disciplinary groups of care providers at the All India Institute of Medical Sciences (AIIMS) along with Jai Prakash Narayan Apex Trauma Centre (JPNATC); and University College of Medical Sciences (UCMS) along with Guru Teg Bahadur (GTB) hospitals will participate in this phase of the study

CHIRI: Improving the control of hypertension in rural India

Background and goals:

Very little is known about the emergence of high blood pressure (hypertension) in rural India, where 70% of the Indian population still resides. There is some evidence that barriers to hypertension control differ according to the stage of transition of the population.

The goal of this study is to assess whether barriers to hypertension control in rural regions of India are similar and whether interventions to improve hypertension control are applicable across different regions in different stages of demographic transition.

Study method

The study will be done using various methods such as interviews and blood pressure measurement of a random selection of rural adults, group discussions and indepth interviews with health care providers. Survey of pharmacies in rural India and piloting of a hypertension control program will be the other components of the study.

Current status of the study

The study received the clearance of Government of India through its Health Ministry's Screening Committee and ethics approval from the Institutional Ethics Committee of the Centre for Chronic Disease Control, New Delhi, India. and the study will begin in the first quarter of 2014.

In a pilot study of pharmacies, it was found, contrary to popular belief, that government pharmacies contain essential medicines to treat hypertension, heart diseases, and diabetes. Why people are not accessing government facilities for these medicines will be an interesting question to be answered.

Funding source and collaborators

This study is funded by the Global Alliance for Chronic Disease (GACD) and the Australian Government National Health and Medical Research Council, one of the member organizations of GACD.

The collaborators are Monash University, The George Institute for Global Health – Australia, George Institute for Global Health – India, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Rishi Valley Rural Health Centre, and Christian Medical College Vellore.

AT A GLANCE

- Contrary to popular belief the prevalence of hypertension in rural India is as high as or more than in urban India
- It is a well known fact that hypertension is poorly controlled in both urban and rural Indian populations
- The barriers to hypertension control in rural India differ significantly from urban India and also between different rural regions
- This study helps us to understand and develop strategies to overcome barriers to hypertension control in rural India



Overcoming barriers to effectively control hypertension in rural areas



A national salt reduction strategy

Salt Reduction Project Switch the Salt

Background and goals:

Cardiovascular diseases are the leading cause of death in India with high blood pressure responsible for about 750,000 deaths each year. There were approximately 118 million people with hypertension in India in 2000 which is projected to rise to 213 million by 2025. High salt intake is a main cause of the disease burden attributed to high blood pressure leading to many serious but avoidable complications, premature mortality and significant healthcare costs. The scientific evidence in support of salt reduction is strong but the data required to put those scientific insights into reduced population salt intake are mostly absent. The aim of this project is to develop the evidence base required to formulate a national salt reduction program for India.

Study method

The research will comprise a stakeholder analysis involving government, industry, consumers and civil society organizations; a cross-sectional survey of an age-and-sex stratified population sample drawn from urban (slum and non-slum) and rural areas of North and South India; and a systematic quantitative evaluation of processed and restaurant foods. The stakeholder interviews will be analysed in order to summarize the main themes

and define the broad range of factors influencing the food environment in India. The population survey will estimate mean daily salt consumption through the collection of 24-hour urine samples and dietary surveys defining the main sources of sodium in the diet. The survey of foods will record the nutritional composition of the food supply. The findings from this research will be synthesized and a national salt reduction strategy for India will be developed with key stakeholders.

Current status

The project is anticipated to commence fieldwork in the first quarter of 2014 and will report main results later that year. Pilot testing of the stakeholder interviews has been undertaken and researchers have already uncovered some interesting emerging themes with participants debating the barriers and enablers for reducing salt in their diets. Many participants highlighted the role of media in influencing food choices: "Media works on the minds of the people because it advertises food like [food product] with the caption 'gives healthy bones'. I told my younger brother not to eat [food product] because it's unhealthy and he said 'no, no, it is showing on TV, so it is good for your health'. He said 'it is written here Taste bhi, Health bhi'. So media does work on minds of the people". Other participants highlighted that there was no mechanism for reviewing and ensuring correctness of general health claims of food and drink advertised in the media and the need for tools such as traffic lights to interpret labels.

Funding source and collaborators

This work was supported by a funding award made by the Global Alliance for Chronic Disease through the National Health and Medical Research Council of Australia. The George Institute work in collaboration with the Public Health Foundation of India and the Centre for Chronic Disease Control.

AT A GLANCE

- High blood pressure is responsible for approx 170,000 Indian deaths each year
- High salt intake likely responsible for half the disease burden
- 1200 participants from rural, urban and urban slum populations
- 24Hr urinary sodium and dietary recall surveys to estimate dietary salt intake
- Aim to develop a national salt reduction program

future projects at the George

The overall research strategy of GII will be driven by its long term objectives. Based on that some key anticipated projects in the area of non-communicable diseases and injuries are the following:

Adolescent health

GII along with our collaborators are envisaging a large cohort study around adolescent health in India. The study will address a huge gap in extant literature about the problems faced by adolescents and the type of services availed by them. A key component of the study will be to assess the impact of new media on health information and health services amongst adolescents and the eventual plan is the develop an intervention that leverages the social media to understand adolescent health problems like mental illnesses, injuries, risk taking behaviours and their socio-environmental determinants.

Mental health

Almost one in four population in India are affected by common mental disorders like depression, anxiety and emotional disorders, but data shows that only 15-25% of those suffering from any mental disorder actually receive any mental health care in low and middle income countries such as India. Primary reasons for such are stigma associated with mental health and the lack of trained mental health professionals, who can identify and manage such disorders, in large parts of India. This deficit is more acute in rural India.

The focus of the mental health project will be on mental health services delivery using m-Health and electronic clinical decision support tools. The aim of the study will be to provide affordable and easily accessible mental health care amongst disadvantaged rural populations which are in particular need of such care. Developing a package to address stigma will also be a part of the project. The project will develop a model of health care that can be delivered by ASHAs and primary care physicians after suitable training, and would leverage the expertise that the institute has developed in the area of cardiovascular research using similar models.

The project will be funded out of a Wellcome Trust-DBT India alliance Fellowship and will be over the next 5 years.

Diabetes and allied health

This body of research is based on the fact that India continues to have a large numbers of people suffering from diabetes and related complications. It is estimated that about 9% people suffer from diabetes in India (more than 65 million). Diabetes related complications are also a major cause of worry. Initial results also indicate that gestational diabetes that leads to adult onset diabetes later on is also high.

Future research will aim to focus on these different components of diabetes and will develop interventions to reduce the burden of this condition in the population.



Our mission is to improve the health
of millions of people worldwide.

Our *Collaborators*

| | | |
|---|--|---|
| Aditya adhikari hospital, Mysore | Gandhi Medical College Hospital, Hyderabad | Nizam Institute of Medical Sciences, Hyderabad |
| Aditya Bira Memorial Hospital, Chichwad, Pune | Ganga Ram Hospital, New Delhi | Osmania Medical College and Hospital, Hyderabad |
| All India Institute of Medical Sciences, New Delhi | Global Hospitals, Hyderabad | P.D.Hinduja National Hospital and Medical Research Center, Mumbai |
| Apollo Gleneagels, Kolkata | GNRC Hospitals, Guwahati | Peerless Hospital and B.K.Roy Research Center, Kolkata |
| Apollo Hospital, Hyderabad | Government Medical College Hospital, Thiruvananthapuram | PGIMER, Chandigarh |
| Apollo Hospitals, Chennai | Guru Teg Bahadur Hospital (GTB) and University College of Medical Sciences, Delhi | Post Graduate Institute, Chandigarh |
| B.J.Medical College and Civil Hospital, Hyderabad | Indian Council of Medical Research, New Delhi | PSG Hospital Coimbatore |
| B.Y.L Nair Hospital, Mumbai | Indian Institute of Public Health, Hyderabad | Public Health Foundation of India, New Delhi |
| Baby Memorial Hospital, Kozhikode | Indian Institute of Technology Bombay | Rishi Valley Health Centre, Chittoor |
| Baptish Christian Hospital, Tezpur,Assam | Jawaharlal Nehru Institute of Post-Graduate Medical Education and Research, Puducherry | Sangath, Goa |
| Birla Institute of Technology and Science, BITS Pilani, Hyderabad | Jay Prakash Narayan Apex Trauma Center (JPNATC), AIIMS, New Delhi | Sanjay Gandhi Post-Graduate Institute of Medical Science, Lucknow |
| CARE Foundation, Hyderabad | Jehangir Hospital, Pune | South Asian Network of Chronic Disease, New Delhi |
| CARE Hospital, Banjara Hills, Hyderabad | Krishnarajendra Hospital, Mysore | Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum |
| CARE Hospital, Nampally, Hyderabad | Lalitha Super Specialities Hospital, Guntur | St. John’s Hospital, Bangalore |
| CARE Hospital, Ramnagar, Vishakhapatnam | LV Prasad Eye Institute, Hyderabad | St. John’s Medical College, Bangalore |
| Centre for Chronic Disease Control, New Delhi | Lotus Diagnostic Centre, Bangalore | St.Theresa’s General Hospital, Hyderabad |
| Chest Clinic, Sri Rama Krishna | Mahavir Hospital & Research Center, Hyderabad | Stanley Medical College, Chennai |
| Christian Medical College and Hospital, Ludhiana | Maternal Health and Research Trust, Hyderabad | The George Foundation, Bangalore |
| Christian Medical College and Hospital, Vellore | Medical Centre, Coimbatore | University of Hyderabad |
| Deccan College of Medical Sciences, Hyderabad | Mediciti Hospital, Hyderabad | Vijaya Health Clinic, Chennai |
| Department of Biotechnology, New Delhi | Muljibhai Patel Urological Hospital, Nadiad, Gujarat | Vikaram Hospital, Mysore |
| Dr. Shroffs Charity Eye Hospital, New Delhi | National Institute of Mental Health and Neuro Sciences (NIMHANS), Bangalore | Welcome Trust - Department of Biotechnology Alliance |
| Fortis Hospital, Kolkata | | |
| Fortis Hospital, New Delhi | | |

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