

THE ANNUAL REPORT



The George Institute
for Global Health India

Better treatments. Better care. Healthier societies.







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

We aim to reduce premature and preventable deaths and disabilities by generating actionable evidence.

Our research develops evidence to help affordable and effective life-saving interventions to reach all sections of our societies who could benefit from them.

Our work focusses on the disadvantaged and the vulnerable.



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The George Institute for Global Health

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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, 1956 (now section 8 of the Companies Act, 2013) and recognised by the Department of Scientific and Industrial Research (DSIR), Government of India.

We are also registered under Foreign Contribution (Regulation) Act, 2010 as well as under sections 12A and 80G, of the Income Tax Act, 1961



OUR ORGANISATION

On July 1, 2019, we launched Strategy 2025, a plan that will guide the Institute's growth and development over the next six years.




At its core, Strategy 2025 is all about impact – on the health of millions of people, particularly those living in disadvantaged circumstances in rich and poor countries alike. It is a major new phase in the evolution of the Institute, and we look forward to the new opportunities it provides for us to improve the world's health.

OUR STRATEGY

RESEARCH GOALS

-  **Better Treatments** Finding better treatments for the world's biggest health problems
-  **Better Care** Transforming primary healthcare to support better health for more people
-  **Healthier Societies** Harnessing the power of communities, governments, and markets to improve health

OUR VALUES

-  **Humanitarian commitment** Spurs us to tackle the health issues affecting high-risk and disadvantaged people worldwide
-  **Focus on excellence** Ensures we will produce scientific evidence that is ethical and of the highest quality
-  **Creativity** Encourages us to challenge traditional thinking and provides an impetus for new and innovative solutions to the world's leading health problems

IMPACT GOALS

-  **Advocacy & Thought Leadership** The growth of effective advocacy and a thought leadership programme aligned to our research and entrepreneurship objectives
-  **Disruptive Entrepreneurship** The growth of a disruptive entrepreneurship programme aligned to our research goals
-  **Integrity** Underpins all our work and interactions, including our collaborations with partner organisations worldwide
-  **A 'can-do' approach** Helps produce timely, effective action, even in the face of adversity or other barriers to implementation
-  **Emphasis on impact** Will ensure our work has real consequences for those most vulnerable to disease and injury



FROM OUR LEADERSHIP

On behalf of The George Institute for Global Health, India, I am pleased to present the Annual Report for 2020–21.

It has been a difficult period for all of us; dominated by issues pertaining to COVID-19 pandemic. It is during such extraordinary times that we get to see humanity's vulnerability. Not only do we accept the impact of nature's forces, but we also develop a deeper awareness of how closely the lives of all of us are interconnected. The need to stand for each other has never been more obvious.

As a response to the COVID-19 crisis, we undertook a diverse range of initiatives. Our researchers prepared a policy note based on the global evidence from recent pandemics to understand issues and challenges during COVID-19 and highlighting the clear need of guidance for community health workers.

In addition, adverse impact on mental health of populations, especially on those having existing mental health illness is a disturbing corollary of the pandemic. The pandemic proved to be a livelihood crisis pushing millions of people into the vicious cycle of economic stagnation, loss of livelihood and worsening food insecurity. With scarcity of data on the real impact, it becomes necessary that we focus on strengthening our mental health system. On this front, our mental health team outlined a series of recommendations to help policymakers, service providers and other stakeholders, strengthen existing mental health systems and develop new ones to mitigate the mental health impact of COVID-19.

While the chief focus of the health systems was on the pandemic, it was important to emphasise that the non-COVID diseases were not completely ignored. The guidelines propounded by the Union Ministry of Health and Family Welfare, Government of India, also emphasised the need for ensuring that essential health services for non-COVID conditions are not neglected as additional activities for COVID-19 are scaled-up.



The pandemic has put healthcare systems globally under immense pressure. As researchers, the responsibility is on us to uphold our commitment towards evidence-based research to support vulnerable communities and be part of solutions that strengthen public healthcare delivery

Vivekanand Jha
Executive Director
The George Institute India



Observing the increasing incidence of Non-Communicable Diseases (NCDs) around the world, the Institute over the year was actively involved in expanding new partnerships globally. We were honoured to contribute as a member of the steering committee for the workshops organised by The UK Academy of Medical Sciences to collectively address the growing prevalence of NCDs. Along with other stakeholders, we also contributed to the WHO release of technical specifications for hypertension measuring devices, emphasising that self-monitoring at home would help health systems cope with COVID-19 by ensuring proper medical care, particularly in low-resource settings.

We worked with UNSW Founders based at the University of New South Wales in Australia to bring a flagship programme "Health 10x: India Innovation Immersive Experience 2020" to India for health start-ups and innovators leveraging technologies and innovations aimed at addressing the burden of NCDs.

The George Institute, being part of the COVID-19 Kidney Health Action Group, supported the development of a Haemodialysis Unit Preparedness Checklist, to address unique needs of patients with kidney failure. The checklist describes the steps that need to be followed at each stage – from the arrival of the patient to the unit to the end of dialysis treatment to ensure the safety of patients and health providers.

This year's evidence2policy lecture was delivered by Dr Ophira Ginsburg, Director, High-Risk Cancer Genetics Program, Department of Population Health at New York University, Grossman School of Medicine, who reflected on the topic "Lost in Translation: Evidence-based Strategies for the Prevention of Cancer in Women".

I take this opportunity to thank all stakeholders who have been with us during our journey of growth as well as our endeavour of creating stronger and well rooted researchers, partners, institutions, experts, academicians, government departments, and our valuable staff members. We look forward to another fruitful year of successful evidence-based work, engagement with stakeholders, and expanding the scope of our implementation research. I also urge everyone to keep safe and continue following COVID-19 appropriate behaviour.


Vivekanand Jha
Executive Director



BETTER CARE

IMPROVING RESILIENCE AMONG ADOLESCENTS IN URBAN SLUMS

According to the World Health Organisation (WHO), 20% of children and adolescents suffer from a disabling mental illness, with suicide being the third leading cause of death for adolescents. According to estimates, many adolescent mental disorders go untreated and undiagnosed. Poor living conditions, social vulnerability, and substance abuse make adolescents living in urban slums particularly susceptible to mental disorders.

The Mental Health Risk Factors among Older Adolescents living in Urban Slums: An Intervention to Improve Resilience (ANUMATI) project, aims to explore risk and resilience factors for common mental disorders among older adolescents (15–19 years) living in urban slums. A community intervention module to enhance resilience will be developed and piloted to provide information about its feasibility.

The project employs a cross-sectional mixed methods design conducted in two urban slums of North India (Faridabad) and South India (Hyderabad) with a total population of about 4000. The number of eligible adolescents has been determined through a mapping of the area and a census of selected slums. Formative research was conducted to better understand adolescents' perceptions of mental health problems, associated risk factors, and resilience factors. A quantitative survey of 3490 study participants was undertaken to assess mental health, individual and environmental risk, and resilience. As part of the qualitative intervention, groups of adolescent boys and girls have been formed at both sites. Feedback from these groups will be gathered. Afterwards, a situation analysis checklist will be developed, and qualitative interviews conducted with parents, teachers, and other community stakeholders.



An inadequate understanding of mental health can lead to serious psychological problems. COVID-19 has led to great psychological stress among adolescents. Our Adolescent Expert Advisory Groups' (AEAGs) mission is to promote awareness, prevention, and treatment of mental health disorders by dispelling prejudices and stigma associated with it

Dr Y.K. Sandhya
Senior Research Fellow, Mental Health
The George Institute India



ADDRESSING ADOLESCENTS' MENTAL HEALTH NEEDS

In India, there are approximately 250 million adolescents. Depression, stress, and suicide/self-harm account for a major share of the burden of death and disability in this age group. Only one in 27 people with depressive disorders receives effective treatment.

Apart from poor awareness of mental health needs, there are no affordable, accessible, and effective treatments available in rural areas for treating mental disorders. The stigma associated with mental illness exacerbates the situation.

The Adolescents' Resilience and Treatment Needs for Mental Health in Indian Slums (ARTEMIS) project works with adolescents aged 10 to 19 to remove the stigma surrounding mental health. It will implement a mobile device-based decision support system (mhealth) for urban primary healthcare staff (UPHCs) and determine the effect of depression, stress, and suicide risk in adolescents.

This trial is an implementation cluster-randomised trial designed to evaluate an anti-stigma campaign and an electronic decision-making system to reduce depression and stress among adolescents living in slums. The process and economic evaluation are also being conducted in 60 slum clusters located in Delhi and Vijayawada.

The ARTEMIS project began its operations in August 2020. In Delhi, a theory of change workshop to identify causal pathways to change was conducted and witnessed the participation of adolescents, parents, non-physician health workers, representatives of the medical fraternity, elected representatives of local council bodies and experts in the field of mental health. Adolescent Expert Advisory Groups (AEAGs) consisting of younger adolescents (10 to 14 years) and older adolescents (15–19 years) have been established in both cities.

AEAGs play an essential role in ARTEMIS. Their input led to the identification of adolescent stressors, coping mechanisms, and the most relevant and popular communication channels for adolescents, which has shaped the development of the anti-stigma campaign for the project aimed at addressing ignorance, prejudice, and discrimination.

Work in the formative sites has begun to test the baseline tool, the anti-stigma elements created and the mHealth components of the intervention that will be used by the UPHC staff.

The policy research led by The George Institute has supported the scale up of telehealth innovations in the SEA Region. Our WHO policy brief calls for governments to invest into telehealth ecosystems with an aim to strengthen primary care in remote areas

Dr Oommen John
Senior Research Fellow
The George Institute India



ROLE OF TELEHEALTH IN ENHANCING ACCESS, ENSURING CONTINUUM OF CARE, AND SUPPORTING HEALTH SYSTEMS DURING COVID-19 PANDEMIC IN SOUTH-EAST ASIA REGION

Our cutting-edge work funded by the WHO-SEARO examined the utility of telemedicine for strengthening health services delivery across the 11 member countries in the region, with a particular focus on what patterns have emerged during COVID-19 pandemic response. The project involved a scoping review and stakeholder consultations with ministries of health in the region to identify key policy interventions to strengthen primary care service delivery through telehealth. Our findings suggest that telehealth can contribute to universal health coverage by improving access to quality and cost-effective health care.

Key findings that can inform policymaking in Southeast Asia include:

- Prioritise telehealth within comprehensive digital health strategies for delivering care; without this, the potential of telehealth cannot be achieved.
- Governments must apply themselves to think through and legalise data governance, standardisation and interoperability, data privacy, and security by embracing comprehensive digital architecture and frameworks to ensure the scalability of telehealth in the SEA Region. Telehealth must be future-ready.
- User acceptability and satisfaction are needed for a thorough rethink and expansion of telehealth in the future. Multiple stakeholder views and perspectives must be integrated.
- Empowering individuals and communities, digital health – particularly telehealth interventions – provides unique opportunities to improve people's health, through the primary health care setups.
- COVID-19 pandemic reinforced and encouraged the use of digital health technologies for surveillance, rapid case identification, contact tracing, public communication, and clinical care.

STOP CHRONIC KIDNEY DISEASE

CKD (Chronic Kidney Disease) is ranked eighth among the top 10 causes of death due to non-communicable diseases. According to a recent analysis from the Million Deaths Study, the number of deaths due to chronic kidney disease in India more than doubled between 2003 and 2013.

The prevalence of chronic kidney disease of undetermined etiology (CKDu) among the rural communities of coastal Andhra Pradesh is high, particularly in the Uddanam region of Srikakulam district. Aware of the need for focused research, The Indian Council for Medical Research (ICMR) and the Government of Andhra Pradesh launched the 'Grand Challenge' to determine the root causes of such high incidences of chronic kidney disease. The George Institute's project "Study to Test, Operationalise Preventive Approaches for CKDu in Andhra Pradesh (STOP CKDu)" was selected in this Grand Challenge.

The STOP CKDu study aims to address all aspects of the problem. It will estimate the disease burden, perform an environmental mapping, and determine the etiology of CKD. The study, which involves nearly 2500 participants from 67 villages, will also examine the economic effects of CKD and develop evidence-based interventions for improving health conditions in the high CKDu incidence areas of Andhra Pradesh.

ICMR and the Government of Andhra Pradesh will form a Scientific Technical Advisory Group (TAG) which will review progress and provide technical guidance to the study team on a quarterly basis.





IMPROVING RECOVERY OUTCOMES FOR BURNS SURVIVORS IN INDIA: A SYSTEMS APPROACH

It is estimated that 180,000 deaths every year are caused by burns – the vast majority occur in low-and middle-income countries, with the highest mortality rates reported in India. Researchers at The George Institute have reviewed community-based rehabilitation for burns in resource-poor settings and highlighted that rehabilitation guidelines or community-based rehabilitation programmes for burns are non-existent.

The ongoing work aims to address barriers in delivering burns care, by strengthening health systems through National Programme for Prevention and Management of Burn Injuries (NPPMBI) and improving burn recovery outcomes. The work is being undertaken in Uttar Pradesh. Data collection and acquisition have begun.

Data collection for the burn registry is ongoing in four medical college sites in Uttar Pradesh and one medical college site in Delhi. Data collection for the qualitative component of the study including understanding health systems factors and patients' journey will start in November 2021.

Impact on burns care during the COVID-19 was explored with care providers across diverse health facilities. In India, learnings to improve care during health emergencies such as COVID-19 were disseminated:

Based on interviews with leaders of burn unit from across the country, challenges for burn care during COVID-19 were identified, and solutions to address these challenges were proposed. This work was completed in consultation with stakeholders from Directorate General of Health Services, Government of India, Indian Council of Medical Research (ICMR) and All India Institute of Medical Sciences (AIIMS), New Delhi.

Processes for the standardised data collection on burn risk and pathways to care for the patients is being explored:

In the pilot burn registry being implemented, details about patient's circumstance leading to burn and the pathway of seeking burn care is being recorded. This is being supplemented by qualitative deeper dive to understand how burn patients navigate care and how learning from this can be translated into policy action.



Our work highlights the critical need for awareness generation among caregivers and policymakers so that concrete guidelines can be developed for rehabilitation of burn victims, especially in low-income settings

Dr Vikash R Keshri
Senior Research Fellow
The George Institute India





THE GEORGE INSTITUTE INDIA

UNDERSTANDING AND PREVENTING CHILD DROWNING IN THE SUNDARBANS, WEST BENGAL

Globally, drowning deaths pose a huge injury burden. Every year, there are nearly 250,000 deaths, 91% of which occur in low- and middle-income countries. According to the WHO's Regional Status Report 2021 on Drowning in South-East Asia, there were 48,774 deaths in India alone, 30% of which occurred in children under the age of 15. Previous studies have corroborated this high child drowning statistic, particularly among populations inhabiting delta and riverine environments.

A substantial proportion of drowning victims are poor, rural, marginalised, and deprived areas of society. Given the high and inequitable burden, there is an urgent need to act in India.

The Sundarbans, West Bengal is one of the largest active delta regions in the world and is home to one of the most underserved populations. It also has the highest reported global drowning mortality rate in the world.

In 2019 we found drowning mortality rates of 121 per 100,000 population in children aged 1–9 years in this region (244 per 100,000 for children aged 1 to 4 years; and 39 per 100,000 for those aged 5 to 9 years).

Children aged 1–2 years are at the highest risk with 58% of drowning deaths. Many of these deaths can be prevented.

The impact created by the project:

- Contributed to the WHO's Regional Drowning Status Report for Southeast Asia to be published in July 2021;
- Identified child drowning burden in Sundarbans;
- Formative work will inform future implementation for drowning prevention, reducing drowning deaths in the population.

Child drownings in the Sundarbans, West Bengal

3

drowning
deaths
per day

58%

of deaths
are aged
1–2 years

#1

cause of death
for children
aged 1–9 years

Under-served communities are most at risk of injuries. It is a vicious cycle of differential exposure, risk and treatment. We need deep prevention across social, environmental and commercial determinants, and that can only be progressed through multi-sectoral action

Dr Jagnoor Jagnoor
Head- Injury Division
The George Institute India



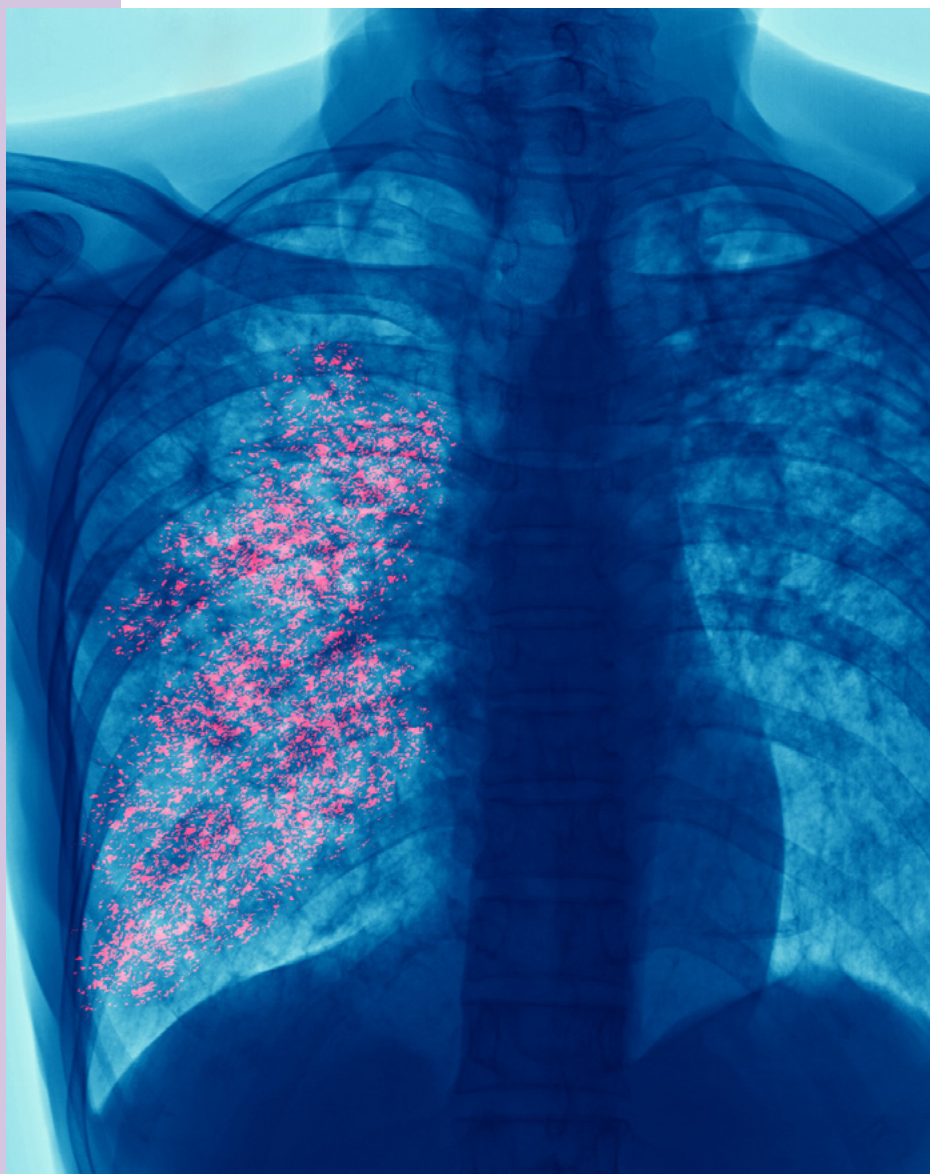


ECONOMIC BURDEN OF TUBERCULOSIS IN INDIA

This project aims to understand the out-of-pocket expenses associated with tuberculosis treatment in India. The study also examines the nature of catastrophic expenditure for tuberculosis patients in India. It will cover 1536 drug-susceptible tuberculosis patients from four states: Assam, Maharashtra, Tamil Nadu, and West Bengal. Patients have been screened from the general population as well as high-risk groups, such as slum dwellers and tea garden workers/families/residents. In addition to drug-susceptible tuberculosis patients, the study also includes multi-drug resistant tuberculosis patients who meet the selection criteria. A unique aspect of this project is that it assesses the health and financial conditions of tuberculosis patients following treatment in India.

A preliminary analysis of data from four states on the post-treatment experience of tuberculosis patients was presented at the International Health Economics Association (iHEA) conference in 2021.

Two final rounds of data collection were conducted in Assam and West Bengal. We now have complete data on 828 drug-susceptible tuberculosis patients from these two states. The study also collected data from 42 multidrug-resistant tuberculosis patients from these two states.



Our preliminary analysis of the post-treatment data from two states highlights

- Many tuberculosis patients who were employed before contracting the disease were unable to obtain a job after completing their treatment.
- Unemployment during and after treatment for tuberculosis contributed to a significant number of patients not being able to repay loans taken during treatment. Additionally, some patients also borrowed money to cover household expenses after treatment.

Our analysis of data to understand the impact of COVID-19 on the study

- Many of the households with tuberculosis patients had zero household income during the complete lockdown months.
- Given that tuberculosis adversely affects the poor, households with tuberculosis patients having no income would negatively impact both their nutritional needs and those of their families.
- The study also points out the devastating impact of COVID-19 on informal employment and recommends that informal workers are protected from the economic consequences of diseases through policies such as paid sick leave, additional food support, and direct benefit transfers.



IMPROVING THE HEALTHCARE ACCESS AMONG SCHEDULED TRIBES: AN IMPLEMENTATION RESEARCH IN KOKRAJHAR DISTRICT OF ASSAM

Tribal communities in India are about 8.6% of the nation's population (104 million). Primarily living in hilly and forested areas, most of them lead a culturally distinct life with poverty and inadequate access to basic amenities and services including health. The fourth National Family Health Survey of India (2015– 16) revealed that only 73% of tribal women received antenatal care against 86% uncategorised groups. Similarly, only 55% of tribal children were fully immunised. This low access to healthcare services among tribal communities can be attributed to several factors such as lack of awareness, poor access to transportation and health facilities, financial constraints, and cultural factors.

To address this burning issue, the team implemented a research project among the tribal and tea tribe communities in the Kokrajhar district of Assam. This study intends to develop strategies to improve primary healthcare access through the existing public healthcare system. The focus is to identify and address the on-ground barriers faced by these communities.

The findings of our research are expected to help, develop, plan, and execute attainable strategies to improve primary healthcare access among these tribal communities. We further expect that our extensively designed action points will be integrated into the health system through deep-rooted dissemination and advocacy efforts. We are aimed at accomplishing ways that can help us achieve the universal health coverage.

COMPREHENSIVE COMMUNITY OUTREACH PROGRAMME THROUGH STRENGTHENING COMMUNITY HEALTH CARE WORKERS IN FIVE URBAN HEALTH CENTRES OF VIJAYAWADA

The Urban Health project, supported by The HCL Foundation and implemented by The George Institute since 2018. In 2020, the project involved ten urban slums in Vijayawada, NTR district and it was expanded to two peri-urban villages in Gannavaram, Krishna district, Andhra Pradesh.

The objective of the proposed project is to improve the overall health in ten urban slum communities and understand the current situation in terms of health care access and delivery in one peri-urban community of Krishna district, Andhra Pradesh.



Effect of COVID-19 on The Urban Health project:

- Eighteen fever screening camps were conducted to identify individuals with influenza-like symptoms. The identified cases were referred for COVID-19 testing and on a positive test report, were sent into quarantine. A telephone consultation service was provided for follow-up and cancellation on mental health for referral cases during the pandemic.
- Awareness programs were conducted in the communities on sanitation, personal hygiene, the importance of washing hands and the use of face masks. Youth and adolescent children drew comics on the importance of a healthy lifestyle and displayed them in front of their houses to spread awareness in their neighbourhood.
- The majority of the population in the locations are daily wage workers who lost their jobs and could not afford to buy food, water or medicine. For people with high blood pressure, diabetes, and other health conditions, healthy food from kitchen gardens and medicine were provided.

Currently, we are working on creating a sustainable health model that emphasises activities developed in conjunction with the community. Some of our activities include building the capacity of frontline health workers, activating Mahila Arogya Samithi groups, conducting health outreach camps, and organising meetings with officials from various health departments to improve coordination of health care outreach services.



REDEFINING POWER IN KERALA: PROFILING WOMEN'S LEADERSHIP IN HEALTH

During a study of health reform in the Indian state of Kerala, it was noted that women play numerous roles and contribute greatly to the health sector. The George Institute India, therefore, conducted a short qualitative study to understand the influences, styles, and experiences of women health leaders in Kerala. We took in-depth interviews with 16 women leaders, including those in senior technical positions, a local self-government institution leader, a traditional healer, and an NGO activist. In addition, we produced a short film titled 'Redefining Power' that described their experiences. They were also featured in the 2019 Women Leaders in Health conference in Kigali, Rwanda. In addition, the project was presented at the 16th World Congress on Public Health in October 2020, and the film was shown at the sixth Global Symposium on Health Systems Research in March 2021.

The researchers also contributed to a book chapter as a part of "The Research in Gender and Ethics: Building Stronger Health Systems (RinGs) Consortium" that features global perspectives on women leaders in global health. In addition, peer-reviewed journal manuscripts are also in the pipeline from this work.



Ms Sharmila, Head Nurse – OT in charge, Trivandrum General Hospital

The PHCRC focuses on consolidating efforts towards effective and efficient primary health care systems through regional and global partnerships that foster measures to overcome critical health challenges faced by vulnerable populations in LMICs

Dr D Praveen

Programme Head, Primary Health Care
The George Institute India



PRIMARY HEALTH CARE RESEARCH CONSORTIUM (PHCRC)

Recognising the importance of low-and middle-income countries (LMICs)-led Primary Health Care (PHC) research, in 2019, the Bill and Melinda Gates Foundation provided funds to set up the PHCRC. The Consortium aims to consolidate the global efforts in PHC research, promote knowledge exchange and capacity building through south-south cooperation, and support better policy making in LMICs by helping to reduce the research to policy gap. The PHCRC is a member-driven body with representatives from all over the world having extensive experience in primary health care policy and systems.

The Consortium has three projects underway, which are expected to be completed in the first quarter of 2022. In tandem with these projects, the PHCRC has built networks across researchers, health practitioners, civil society, and government and multilateral officials. At the request of the WHO SEARO office, we prepared a manuscript on 'Strengthening Primary Health Care in the COVID-19 Era' which was widely viewed. We have 4 more publications underway which are led by authors from low- and middle-income countries, who are guided by the expertise of the Consortium members displaying south-south and south-north collaboration.





DISASTER RESILIENCE AMONG THE RIVERINE COMMUNITY OF ASSAM

Nearly 2 million people are displaced each year in India because of floods, the highest number in the world. Assessing the vulnerability of communities to natural disasters is an important first step toward mitigating flood risks and understanding the impacts. The Char community of Assam lives in alluvial formations (the 'chars') and is plagued by recurring water-related disasters. In 2017, The George Institute undertook a qualitative study among the Char population of Assam and found that a complex interplay of contextual factors plays a key role in the communities' ability to respond and recover from natural disasters.

The present study is aimed at comprehensively investigating all dimensions of community vulnerability in two districts of Assam. The study used a participatory approach to understand community vulnerability and resilience towards disaster. A review of disaster-related policies guided by the Sendai Framework for Disaster Risk Reduction was also done. This seed study will help develop and prioritise interventions for disaster risk reduction for future testing and implementation. A participatory rural approach was used in Bongaigaon and Majuli districts of Assam with a total of 447 participants (196 in Bongaigaon and 251 in Majuli), in collaboration with The Action for Northeast Trust (ANT).

Long term impact on global health via influence on policy, practice, and the public:

Policy: To the best of our knowledge, it is the first comprehensive analysis of 13 national and 25 state disaster management policies /plans /guidelines.

Practice: The next step is to work with disaster management departments and health departments.

Public/Patients: Our findings from the qualitative research show lack of basic resources and institutions in the disaster-prone communities. The presence of infectious as well as chronic health conditions, use of local coping mechanisms like building houses on a raised platform using bamboo stilts and building local embankments and boats to mitigate floods. There were also differences in perspectives among people regarding community vulnerabilities and the impact of disasters. The policy analysis revealed a lack of inclusive decision making across different departments in the formulation and implementation of policies.

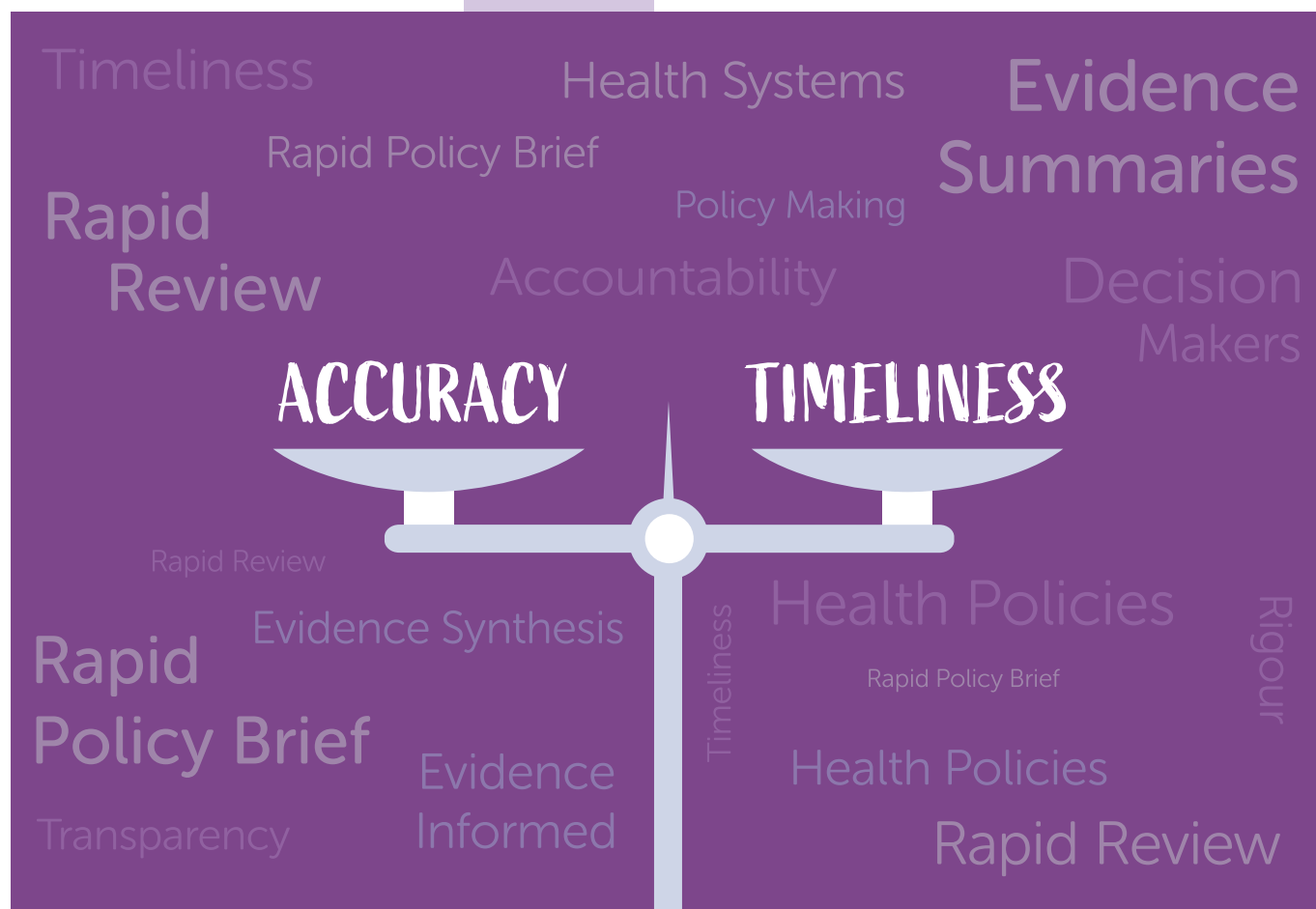
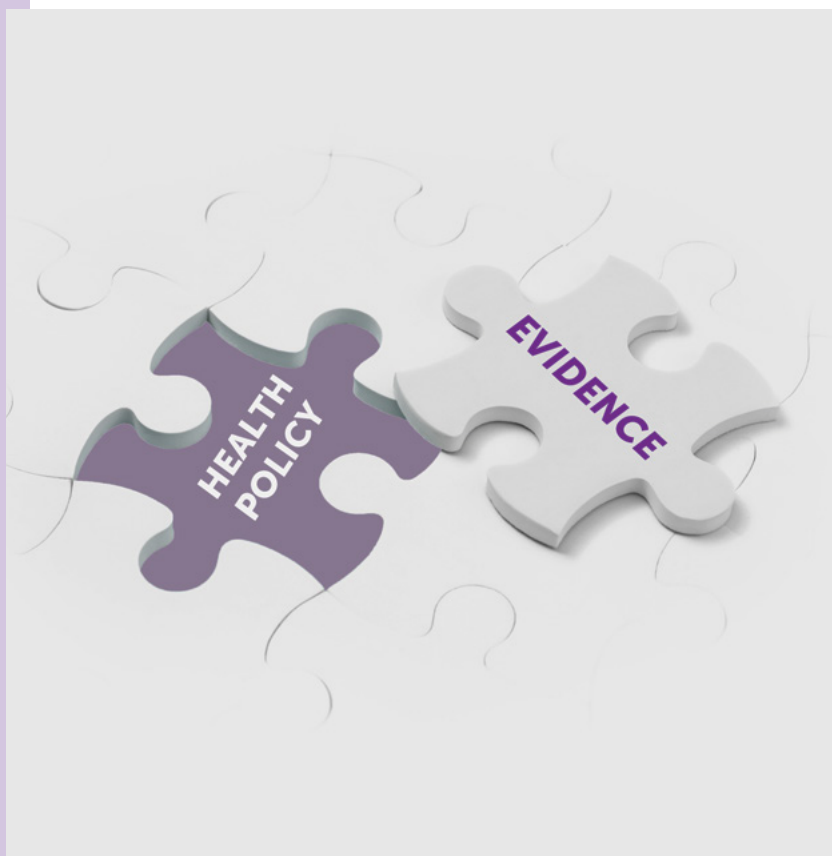


EMBEDDING RAPID REVIEWS IN HEALTH SYSTEMS DECISION-MAKING

Reviewing health policy and systems research evidence can assist decision makers by providing relevant and actionable evidence at every phase of the decision-making process. Rapid reviews are a form of evidence synthesis in which the components of a systematic review are tailored, modified, and optimised to provide information in a timely and contextualised manner.

The George Institute India in collaboration with the National Health Systems Resource Centre and with support from the WHO Alliance for Health Policy and Systems Research, established a Rapid Evidence Synthesis unit that develops and implements tools for producing rapid reviews, rapid policy briefs, and other evidence synthesis products.

Using this platform, several training workshops have been conducted, including sixteen rapid evidence synthesis outputs and landscaping of capacity needs related to evidence synthesis in India. As a result of the initial work, The George Institute has been able to establish a Meta-Research and Evidence Synthesis Unit.



BETTER TREATMENTS

In the early stages of COVID-19, The George Institute India, recognised the seriousness of the pandemic and shifted gears to harness our clinical trials insights into finding practical and real solutions.

HOPE

Among the early images of the impact of COVID-19 were scenes of overwhelmed and undersupplied healthcare workers. In some countries, healthcare workers accounted for 10 percent of all COVID-19-related deaths. In India, COVID-19 took the lives of thousands of healthcare workers. These losses exacerbated the impact of COVID-19 by weakening the healthcare sector. Recognising the importance of improving healthcare worker protections, The George Institute launched a study to determine whether hydroxychloroquine, when used with personal protective equipment, reduces the proportion of laboratory-confirmed COVID-19 among healthcare workers in comparison to the use of personal protective equipment alone. Participants in the intervention arm receive 800 mg of hydroxychloroquine on the day of randomisation and then 400 mg once a week for 12 weeks in addition to the use of personal protective equipment. In the control arm, participants continue to use personal protective equipment alone. The main outcome of the study would be the proportion of laboratory-confirmed COVID-19 in the six months after randomisation. The randomised trial of more than 400 healthcare workers across nine hospitals in India will provide valuable insights into how to protect them from COVID-19.

CLARITY

In addition to protecting people against the spread of COVID-19, there has been great interest in limiting its effects for those that catch the disease. Angiotensin Receptor Blockers (ARBs) may ameliorate the effects of COVID-19 by limiting the spread within the body and by supporting the body's natural anti-inflammatory responses. The CLARITY study seeks to determine whether ARBs can shorten the duration of risk of severe COVID-19 disease.





A total of 787 participants have been randomised in this multi-centre, international, prospective, randomised controlled trial. The primary outcome is disease severity measured using a 7-category ordinal scale modified from the WHO Clinical Progression Scale, assessed on day 28. CLARITY will be delivered through existing health service processes with minimal additional impact on the delivery of critical care.

ASCOT

COVID-19 has driven many innovative clinical approaches and solutions. But often what gets shown to be effective in a laboratory doesn't effectively translate to real world settings and patients. The Australasian COVID-19 trial (ASCOT) aims to quickly generate clinical evidence about treatment for COVID-19 that can be applied to reduce mortality or the need for mechanical ventilation in hospitalised but not yet critically ill patients. The ASCOT is an Adaptive Platform Trial (APT), which is designed to study multiple interventions in a disease or condition by adding or removing treatment interventions to the trial using a predefined decision algorithm. The ASCOT trial researchers partnered with The George Institute India to oversee the trial in India given its substantial experience in operating clinical trials in the country.

PROVE

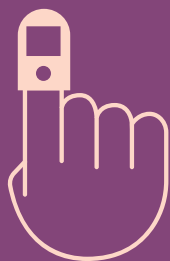
The availability of ventilators was a key factor in how many patients were successfully treated. For many countries, including India, there were just not enough ventilators available. The George Institute India determined that there was a new approach to providing oxygen to patients and set about studying its effectiveness. A new 3D printed connector to support a Passive Non-Invasive PEEP device mask was studied in a prospective, multicentre, parallel arm, open label randomised controlled trial.

The connector helps hold together standard medical equipment (non-invasive mask, a filter, and a PEEP valve) without the use of a ventilator. The PROVE study aims to test if administration of supplemental oxygen via the Non-Invasive PEEP device mask is superior to administration of oxygen by nasal cannula/prongs or a simple face mask in reducing the need for advanced respiratory support. A total of 117 participants have been enrolled into the PROVE study from two hospital sites in India.

COVID STEROID 2

One of the most common treatments for severe COVID-19 is the steroid dexamethasone. The standard treatment is a 6mg dose, with some indications that a higher dosage might benefit those with more severe disease. However, steroids can sometimes suppress the body's immune system, which in the COVID-19 situation means patients have a diminished ability to fight other types of infections. This study by The George Institute of 1000 patients in 26 hospitals in India, Denmark, Sweden and Switzerland is the first COVID-19 trial to report on long term mortality and one of only a few designed so that doctors didn't know which patient received which dose (ie, blinded). Results published in October 2021 will provide useful guidance for treating COVID-19 treatment. Given that dexamethasone is cheap and widely available, even small improvements in treatment outcomes and death rates at population wide levels would be important.





INDIA HEALTH ACCELERATOR PROGRAMME (IHAP)



The George Institute India's Health Accelerator Programme is designed to increase innovation, entrepreneurship, and leadership capacity in the areas of health impact and business results. A key part of the programme is identifying potentially high-impact, disruptive innovations through competitions and challenges, and then facilitating their growth and effectiveness.

Broad Aims

- Reinforcing the ongoing need to enhance innovation focus among stakeholders.
- Commitment to serving and strengthening health systems in collaboration with partners and stakeholders.
- Identifying and fostering local health innovations which can potentially have a crucial role in strengthening health systems.
- Anticipating and responding to complex challenges facing health systems and societies in the 21st century with a holistic outlook and readiness.

Health Innovation Fellowship

As part of the IHAP, The George Institute Health Innovation Fellowship is structured to provide an enabling environment for innovators, to help them refine their solutions, design validation studies and clinical trials to support the regulatory requirements and thereby build their solutions for scale. The innovators are mentored by in-house and partner experts who are leading clinical, regulatory and health systems experts, industry mentors, and investors. The mentoring and expert guidance provides targeted feedback, and practical insights to grow an innovative solution to a working and ready-to-scale stage.



Socio-economic inequalities remain a challenge in the access to treatment and care for chronic illnesses. While the biomedical determinants of dialysis outcomes are well understood, socio-economic determinants have only recently started to receive attention

Abhinav Bassi
Senior Research Fellow
The George Institute India



FEASIBILITY STUDY FOR SETTING UP A REGISTRY FOR ASSESSING THE DETERMINANTS OF DIALYSIS OUTCOMES

A pilot project in Chandigarh and Gurgaon showed that diabetes and hypertension were responsible for over half the cases of kidney failure. Additionally, it brought to light the enormous economic disparity and how it affects the patient and their family. Although regular treatment had a positive impact on the economic well-being of the family by keeping them normal and productive, many patients were forced to give up dialysis for financial reasons.

Based on the success of the pilot, a larger multi-centre study is currently underway across 10 states in India. More than 750 patients with end-stage renal disease are currently receiving maintenance hemodialysis. An easy-to-use, secure, web-based data collection tool based on open-source platforms has been developed and is being used to monitor and follow the patients for a period of two years. Data is being collected on the impact of the treatment modalities, comorbidities, socio-economic determinants, and quality of life.





HEALTHIER SOCIETIES

HEAT EXPOSURE AND ENVIRONMENTAL ACTION FOR LIMITING THE BURDEN OF CHRONIC KIDNEY DISEASE OF UNDETERMINED ETIOLOGY (CKDu) IN ANDHRA PRADESH: HEAL

Several states in India experience repeated heatwaves, but the effects of heat stress on kidney function have not been studied thoroughly. The effect of heat stress on kidney function has emerged as a research area particularly in relation to climate change and the effect it has on CKDu. The George Institute has initiated a project to analyse kidney health risks associated with environmental heat stress in the Uddanam region of Andhra Pradesh. The study will look at changes in kidney functions in individuals working in occupations that involve prolonged heat exposure and physical exertion.

During the second phase, the study will examine the effects of hydration, protective clothing, and behaviour changes on kidney function and heat exposure. Standardised methods for estimating heat stress and its impact on kidney health will be developed and validated through this.

These results would inform occupational health policy for those exposed to extreme heat environments and develop preventative strategies that could lead to occupational guidelines as well as standard monitoring measures.



COVID-19 forced us into a reckoning of how groups are left behind, because those of us with privilege were also experiencing a kind of helplessness and panic. For some of the homeless persons we spoke to, this is their normal. As a society we can no longer accept this. We must embrace acts of radical solidarity for our fellow urban denizens... in small and big ways

Dr Devaki Nambiar
Programme Head, Health Systems and Equity
The George Institute India



PROMOTING EVIDENCE-INFORMED INTERVENTIONS FOR COMMUNITIES OF THE HOMELESS THROUGH AN ACTION NETWORK (PEICHAN)

A study was being conducted on homeless women in Delhi who lacked access to Maternal and Child Health (MCH) services. Following COVID-19, it had to be suspended just when it was needed most. With PEICHAN's seed funding evaporating as well, we were able to secure a grant from the Royal Society of Tropical Medicine and Hygiene (RSTMH) to continue the ethnography examining the impact of COVID-19 on care-seeking among homeless women.

We partnered with the Centre for Equity Studies (CES) to help us provide patient navigation services, improve access to diagnostics, and medicines. These services were critical to filling the gaps in MCH services in the health system. The CES had stopped carrying out these activities during COVID-19 but we were able to persuade them to restart these for about a dozen homeless families, including pregnant women in need of antenatal care services at the two locations where we were doing fieldwork for RSTMH.

Fieldwork remains ongoing and we are hopeful of continuing to support on the groundwork with the urban poor.





THE GEORGE INSTITUTE INDIA

ASSESSING SYSTEM CAPACITY FOR IMPLEMENTING INTERVENTIONS FOR SAFE SCHOOL ROUTES IN A TIER II CITY IN MADHYA PRADESH

Road traffic collisions are the leading cause of death among adolescents aged 15–19 years and can result in Gross Domestic Product losses of up to 5%. In 2016, a study in Hyderabad found that a sixth of all children reported a road injury during school journeys, which was strongly associated with travel mode and distance to school.

In 2017, The George Institute injury team conducted a qualitative study with micro-level stakeholders and found that improved infrastructure, adult supervision, and better enforcement along with improved knowledge were important factors for road safety. Building on this work, a new one-year study in collaboration with the Atal Bihari Vajpayee Institute of Good Governance and Policy Analysis was launched.

The current research project aims to assess the capacity of the system to implement a road safety intervention involving safer and more accessible commuting routes for school children in Madhya Pradesh. A map of the implementing–stakeholders, such as government and non-government agencies, building an understanding of systems capacity, identifying barriers and facilitators to improving roads and developing road safety package for schools. Part of the project will include rating the roads around schools for safety from 1 to 5 stars.

The insights gained will aid local officials and policymakers in efforts to reduce child injury related to getting to and from school.

SALT SUBSTITUTE IN INDIA STUDY – A RANDOMISED, DOUBLE-BLIND, CONTROLLED TRIAL

Excess salt consumption is strongly associated with high blood pressure, a leading risk factor for cardiovascular diseases (CVDs) and contributes to an estimated 1.47 million deaths annually in India. Since salt is a large part of cooking and seasoning in the home, the use of salt substitutes can be an effective way to reduce salt intake.

This study provides robust data on the effects of this form of salt substitution on blood pressure. After three months, study participants showed a significant reduction in their systolic blood pressure (SBP). There was also a significant increase in the amount of potassium consumed in the salt substitute group.

Participants reported during the study that salts were similar, indicating the reduced-sodium salt substitutes are acceptable for home cooking to our study participants.

The findings suggest that the replacement of salt with a reduced-sodium added-potassium salt substitute is an acceptable and effective dietary intervention for lowering SBP in hypertensive individuals in rural India. Salt substitutes can be an additional tool for policymakers in India to leverage in support of reducing deaths and illnesses related to cardiovascular issues and promoting better health.





COMMUNITY-BASED BEHAVIOUR CHANGE INTERVENTION TO REDUCE DIETARY SALT INTAKE

Non-Communicable diseases in India are a growing health challenge, with cardiovascular conditions responsible for 2.3 million deaths each year. Nearly a quarter of these deaths are due to high blood pressure, which in turn is linked to excess salt consumption. Indians consume on average twice as much salt as the recommended level. Yet, a little research exists to support salt reduction interventions in India. Through this study we aim to develop and implement a community-based behavioural change intervention to reduce the salt intake of the participants. A pre-post intervention design (a pre-post study measures the occurrence of an outcome before and after a certain intervention is implemented) and outcomes will be assessed during the study by randomly selecting 1500 participants from 28 villages in 2 primary health centres in Siddipet district, Telangana.

The trained ASHAs will deliver key messages about salt reduction during home cooking to households. Specifically, messages about salt-related myths, misconceptions about low sodium diets and the effects of high salt consumption on health will be presented.

The key highlight of the study includes:

Formative research, which was carried out with 49 participants from two villages, identified the main sources of sodium in the diet, salt-related behaviours and drivers, and other relevant information.

The mapping of villages and the listing of households, including the ages and genders of all household members, were collected for each village. A random selection of participants was made from three target household groups: household cooks, decision-makers, and general household members (18-44 years old and > 44 years old) stratified by gender and age.

Insights from the study will serve as much-needed evidence to inform policy makers and implement an effective, cost-effective community intervention to reduce salt intake among rural communities.



Many Indians consume more than twice of the WHO's recommended salt intake. We are influencing behaviour change in our communities by encouraging adoption of simple measures to regulate their salt intake

Sudhir Raj Thout
Research Fellow
The George Institute India





THE GEORGE INSTITUTE INDIA

ACCOUNTABILITY FOR INFORMAL URBAN EQUITY: ARISE

Marginalised communities in India need support in claiming their rights to health, amplifying their voices, and building government accountability and capacity to augment their services.

The Accountability for Informal Urban Equity (ARISE) hub at The George Institute is working with waste pickers to understand their living conditions and to explore how the health systems treat them. The Participatory Action Research Method is being used; key stakeholders have been identified and a scoping exercise has been conducted. The ARISE Hub at The George Institute also supported waste pickers during COVID-19. It is part of a global consortium that bring together partners across Bangladesh, India, Kenya, and Sierra Leon and is focused on improving governance, accountability, and policy for the marginalised.

USE OF PARA DATA TO EXPLAIN VARIATION IN INCOME

The use of para data to explore measurement errors in surveys has received little attention. This study attempts to fill this gap by examining how para data can be used to detect differences in the interviewing process and predict interview quality. The learning from this study will feed into other surveys being conducted using computer-assisted methods. This study will use the wealth of information contained in the para data collected in the Delhi Metropolitan Area Study (DMAS) conducted by the National Council of Applied Economic Research to study measurement error in data. Studies investigating associations of multivariate para data patterns with interviewing quality are limited, a gap that will be addressed in our work. Supervised machine learning methods, a novel application in this context will be used to identify poor quality interviews.





OUR IMPACT



The George Institute India became a member of the Healthy India Alliance



The George Institute rapporteured in the Kerala Health Conference – Making Sustainable Development Goals a reality

Over

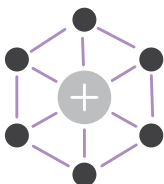
700

Community members, ASHAs and Doctors trained



Our Executive Director shared evidences at the Town Hall, on 'Hearing on NCDs' convened by the WHO Independent Panel on Pandemic Preparedness and Response

POLICY/SOCIAL ACHIEVEMENTS



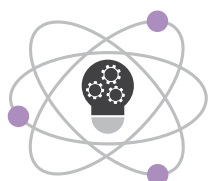
The Diabetes and Infection Network was launched

February 2020



Virtual round table series consultation on Safe, Effective & Comprehensive use of Telemedicine was conducted

June 2020



India's first Health Policy and Systems Research (HPSR) fellowship programme was inaugurated The George Institute India, is one of the organisations involved

January 2021



OUR GOVERNANCE

Professor Vivekanand Jha

Executive Director
The George Institute India

Prof Vivekanand Jha is the Professor and Chair of Global Kidney Health, Imperial College, London, Conjoint Professor of Medicine, University of New South Wales, Sydney and Professor at Prasanna school of Public Health, Manipal Academy of Higher Education, Manipal, India. He is the immediate Past President of the International Society of Nephrology from 2019 to 2021. Prof. Jha is also a part of several international advisory boards, including membership of the WHO Expert Advisory Panel on Human Cell, Tissue and Organ Transplantation.



Professor Anushka Patel

Vice Principal Director, Chief Scientist
and Professorial Fellow
The George Institute for Global Health

Anushka is a Professor of Medicine at The University of Sydney and a cardiologist at the Royal Prince Alfred Hospital in Sydney, Australia. As the Chief Scientist of The George Institute, she has a key role in developing and supporting global strategic initiatives across the organisation. Her personal research interests focus 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 Australian National Health and Medical Research Council (NHMRC).



Associate Professor Pallab K. Maulik

Deputy Director and Director of Research
The George Institute India

Senior Research Associate
The George Institute for Global Health

Dr Pallab is an Associate Professor at UNSW, Sydney, he is also a Psychiatrist and a Global Mental Health Expert. Supported by the Wellcome Trust-DBT India Alliance Intermediate Career Fellowship in 2014 and multiple other research grants, he has built a mental health research portfolio addressing questions around social determinants of mental health services, international mental health, and intellectual disability. He contributes to National Task Force on Integrating Mental Health in Primary Care and the Lancet Commission on Stigma and Discrimination. He is on the editorial board of a number of journals and sits on advisory committees of many national and international projects.



Amit Khanna

Director, Finance and Operations
The George Institute India

Prior to joining our team, Amit 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 The George Institute's mission and values and is very passionate about being instrumental in driving policy changes in India. Amit is a Chartered Accountant and holds a degree in Commerce from Delhi University.





At The George Institute, we are focused towards holding the holistic mission of seeing our nation transform into healthier societies. COVID-19 has unveiled situations which pose greater challenges for us in supporting those in the dire need of better health outcomes

Pallab Maulik
Deputy Director and Director of Research
The George Institute India

OUR ADVISORS

Professor S V Madhu

Department of Medicine, Division of Endocrinology & Metabolism, University College of Medical Sciences & Guru Teg Bahadur Hospital, New Delhi

Dr Smita Srinivas

Founder Director, The Technological Change Lab (TCLab)
Visiting Professor, National Centre for Biological Sciences
National Centre for Biological Sciences (NCBS),
Tata Institute of Fundamental Research (TIFR), Bangalore

Dr Sonalde Desai

Professor and Centre Director, National Data Innovation Centre (NCAER), New Delhi

Dr Pratap Sharan

Professor, Department of Psychiatry, All India Institute of Medical Sciences (AIIMS), New Delhi

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Dr Bobby John

Managing Director, Editor Æquitas Consulting Pvt. Ltd
Journal of Development Policy and Practice, New Delhi

Dr Abhijit Chowdhury

Professor & Head Department of Hepatology
School of Digestive and Liver Diseases
Institute of Post Graduate Medical Education
& Research, Kolkata

OUR PARTNERS AND FUNDERS

- Manipal Institute of Higher Education (MAHE)
- Indian Council of Medical Research (ICMR)
- National Health Systems Resource Centre of the Government of India
- Health and Family Welfare Department, Government of Andhra Pradesh
- Post-Graduate Institute for Medical Education and Research, Chandigarh
- Department of Biotechnology, Ministry of Science & Technology, Government of India
- National Health and Medical Research Council (NHMRC), Australia
- DBT/Wellcome Trust India Alliance
- Baxter Foundation
- HCL Foundation
- Bill and Melinda Gates Foundation
- Pfizer Foundation
- London School of Health and Tropical Medicine
- Harvard University



OUR COLLABORATORS

- Centre for Chronic Disease Control, New Delhi
- Christian Medical College and Hospital, Ludhiana
- Guru Tegh Bahadur Hospital and University College of Medical Sciences, New Delhi
- Indian Institute of Public health, Bhubaneshwar
- Indian Institute of Public Health, Hyderabad
- Post-Graduate Institute of Medical Education and Research, Chandigarh
- Public Health Foundation of India, New Delhi
- Rishi Valley Health Centre, Chittoor
- Sanjay Gandhi Post-Graduate Institute of Medical Sciences, Lucknow
- Sree Chitra Tirunal Institute of Medical Sciences and Technology
- University of Hyderabad
- Apollo Group of Hospitals
- Care Group of Hospitals
- Fortis Group of Hospitals

KEY INTERNATIONAL COLLABORATORS

- Imperial College, London
- King's College, London
- London School of Health and Tropical Medicine
- Monash University
- University of Oxford
- World Health Organization
- Harvard University
- University of New South Wales, Sydney
- National University of Singapore
- University of Central Lancashire
- Liverpool School of Tropical Medicine, University of Sydney

OUR GLOBAL AFFILIATIONS

- UNSW Sydney (University of New South Wales, Sydney)
- Peking University, China



Our teams have been at the forefront in delivering the COVID-19 response. The past year has been critical for all of us but commitment towards supporting the health of millions has held us together in unity

Amit Khanna

Director, Finance and Operations
The George Institute India

OUR FINANCES

BALANCE SHEET, AS AT 31ST MARCH 2021

(All amounts in INR)

	2021	2020
Equity and Liabilities		
1. Shareholders' Funds		
I. Share capital	25,624,920	25,624,920
II. Reserves & surplus	50,997,788	46,139,892
Total equity	76,622,708	71,764,812
2. Non-current liabilities		
I. Other long-term liabilities	918,602	965,002
II. Long-term provisions	9,388,890	8,236,851
Total non-current liabilities	10,307,492	9,201,853
3. Current liabilities		
I. Trade payables	9,676,674	7,500,184
II. Other current liabilities	90,996,008	107,729,676
III. Short-term provisions	5,815,508	8,261,677
Total current liabilities	106,488,190	123,491,537
Total liabilities	116,795,682	132,693,390
Total equity and liabilities	193,418,390	204,458,202
Assets		
1. Non-current assets		
I. Property, plant & equipment		
Tangible assets	8,795,181	9,340,198
II. Long-term loans & advances	3,507,616	6,026,877
Total non-current assets	12,302,797	15,367,075
2. Current assets		
I. Cash and bank balances	121,678,803	131,267,719
II. Short-term loans and advances	2,412,775	1,653,464
III. Other current assets	57,024,015	56,169,944
Total current assets	181,115,593	189,091,127
Total assets	193,418,390	204,458,202

INCOME & EXPENDITURE ACCOUNT, FOR THE YEAR ENDED 31ST MARCH 2021

(All amounts in INR)

	2021	2020
Income		
Project funds, Grants and Donations	246,901,135	255,260,126
Other Income	4,886,983	6,272,717
I. Total Income	251,788,118	261,532,843
Expenditure		
Employee Benefit Expenses	131,016,048	117,687,662
Finance Cost	6,557	128
Depreciation expense	5,010,080	2,212,193
Operating & Other Expenses	110,897,537	132,917,192
II. Total Expenditure	246,930,222	252,817,175
III. Surplus	4,857,896	8,715,668
IV. Tax Expense		
Deferred tax		-
Current tax		-
Surplus carried to reserves	4,857,896	8,715,668



The George Institute

for Global Health India

Better treatments. Better care. Healthier societies.