



Annual Report 2022-2023

**Centre for Health Research and Development
Society for Applied Studies**

Enabling a World with Healthier Babies, Children and Mothers







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From Our Leadership



We are delighted to share the 2022-2023 annual report with you.

While we are proud of our achievements in research in the past year, we are most proud of our teams. They drive everything we do, and this past year we have invested in establishing processes and championing our work ethos and guiding principles for a safe, ethical, and inclusive work environment. We acknowledge and thank our teams for their perseverance, dedication, passion, and commitment to research.

Dr. Dilip Mahalanabis, our Founder and Mentor, was posthumously conferred the Padma Vibhushan, the second-highest civilian award by the Government of India. It is our privilege to carry forward his legacy.

We formalized our relationship with the Amrita Institute of Medical Science and Research Centre, Greater Faridabad, Haryana, and Dr. Dangs Lab, New Delhi for collaborative research. We are delighted with what these represent: for the spirit of collaboration, for the demonstration that trust, partnership and solidarity are essential for addressing shared public health threats and problems.

We are grateful to our Scientific and Program Advisory Committee members, the Board of Governors, Ethics Review Committee members, and our friends for their guidance, encouragement, and good wishes. We would like to thank all who supported us throughout this eventful year.

We look forward to the year ahead and are excited about what we can achieve together.

Niti Bhandari

Nita Bhandari

Sunita Taneja

Sunita Taneja

Sarmila Mazumder

Sarmila Mazumder

Temsunaro R Chandola

Temsunaro R Chandola

Manju Bagdwal

Manju Bagdwal

Swati Naik

Swati Naik



About us

The Centre for Health Research and Development, Society for Applied Studies (CHRD-SAS), New Delhi, is a premier research organization in India. It pursues research and innovation in communities, primarily at the population level. It develops and evaluates single and integrated interventions that can potentially achieve the desired health impact at different points in the life cycle for mothers and children.

Conduct high-quality scientific and implementation research to inform national policy to improve health and well-being of women and children in India and the developing world

Synthesize evidence and experiences for reorienting policy, strategy and delivery of healthcare for women and children



Rigorous team-based efforts to generate knowledge, develop and test interventions and tools; design innovative and implementable solutions to improve delivery to enhance impact

Strengthen research capacity by creating future investigators and health researchers with desirable skills and expertise

Research Focus

Resource poor settings:

Prevention of diseases, deficiencies and disabilities of public health significance with special emphasis on newborns, children and mothers

Conduct research to support indigenous and partnered efforts at innovative and affordable technologies for children and women

Innovation in implementation of existing health care and social welfare programs to enhance reach and impact

Areas of Research

Women and Children Health and Nutrition Mental Health and Cognitive Sciences
Infectious Diseases Evaluation of vaccines Epidemiology and Surveillance
Implementation Science
Knowledge Integration and Economic Analysis

Women and Children

Health and Nutrition

Research is dedicated to improving women's health during preconception, pregnancy and postnatal period and to understand the determinants of impaired growth and development in children.

CHRD-SAS has developed and evaluated multiple interventions to elucidate their clinical, biological and biochemical effects in the continuum from preconception, pregnancy and childhood on the health of women, and growth and development of children.



Enrolled mother and infant in the study clinic

Research projects

- Impact of a package of health, nutrition, psychosocial support, and water, sanitation and hygiene interventions delivered during preconception, pregnancy and early childhood periods on birth outcomes and on linear growth at 24 months of age (Women and Infants Integrated Interventions for Growth Study – WINGS)
- Impact of an integrated intervention package during preconception, pregnancy, and early childhood on biomarkers of infant growth in the first 6 months of life: A sub-study in WINGS
- Postpartum contraceptive practices among women residing in urban and peri-urban low to lower-middle income neighbourhood in North India
- Impact of an integrated health, nutrition and early child stimulation and responsive care intervention package delivered to preterm or term small for gestational age babies during infancy on growth and neurodevelopment
- Effect of biweekly preventive supplementation with multiple micronutrients and iron folic acid compared to iron folic acid alone in children aged 6 to 59 months on hemoglobin concentration and anemia prevalence: a randomized controlled trial in rural Haryana
- Effect of daily therapeutic supplementation with multiple micronutrients and iron folic acid compared to iron folic acid alone in mild to moderate anemic children aged 6 to 59 months on anemia cure and hemoglobin concentration: a randomized controlled trial in rural Haryana
- Evaluation of the impact of nutritional supplementation plus intensive breastfeeding support compared with intensive breastfeeding support alone on mortality, morbidity and growth in infants aged 0-6 months with growth faltering in low resource settings (Breastfeeding Counselling and Management of Growth in early infancy – BRANCH)
- Effect of community-initiated kangaroo mother care in low birthweight infants on linear growth, infection reduction, breast milk properties and related biological outcomes
- Elimination of Malnutrition through Action-Research on Moderately Acute Malnourished Children
- Availability and Readiness of Antenatal, Intrapartum and Postnatal Care Services – A Prospective Longitudinal Study on Maternal and Newborn Health
- Sustainable, Scalable Interventions to Improve Maternal and newborn health in India (SIIMA) to improve global understanding of key risk factors, vulnerabilities, and morbidity and mortality outcomes among pregnant women and mother-infant pairs
- REMAPP: Redefining maternal anemia in pregnancy and postpartum women: Multicountry, population-based study to establish global haemoglobin thresholds for maternal anaemia

Mental Health and Cognitive Sciences

The Mental Health and Cognitive Sciences Unit hosts a team of trained and experienced psychologists and public health researchers. The team conducts community-based randomized controlled trials, primarily to understand ways to accelerate development in children as well as addresses mental health issues in mothers, young children, and adolescents. The team is also working on newer tools to measure neurodevelopment in children such as eye tracking assessment and global scale for early development (GSED).



Eye tracking assessment of an enrolled child

Research projects

- Evaluating effect of a package of nutritional, WASH, medical and psychosocial care on neurodevelopment: Study nested within the WINGS to evaluate the effect of the package of intervention delivered to mother-child dyad from pre and peri-conception till child ages 24 months on neurodevelopmental outcomes at 24 months of age.
- Use of the Global Scale for Early Development (GSED) within the Women and Infants Integrated Growth Study (WINGS) for impact evaluation on neurodevelopment in children under three years of age, in partnership with WHO
- Efficacy of supplementing milk cereal mixes with varying amounts of protein during 6-12 months of age for their effect on neurodevelopmental outcomes at 12 and 24 months of age
- Nutritional interventions in infancy to improve neurodevelopment outcomes
- Testing the robustness and the predictive value of eye tracking assessment in the early detection of common neurodevelopmental and behavioral problems in the first 24 months of life.

Long term neurodevelopment of low birthweight infants receiving kangaroo mother care during neonatal period on neurodevelopmental outcomes at ages 6 to 7 years.



Neurodevelopment assessments at the study clinic in Devi and Palwal

INFECTIOUS DISEASES

The focus of research is to generate population-based disease burden of major infectious diseases through surveillance, nutrition-infection cross talk and clinical evaluation of vaccines (phase II to IV trials).

Evaluation of Vaccines

CHRD-SAS conducts Phase II and Phase III trials of vaccine candidates for diseases of national important in children and adults. We are a part of the clinical trial network of National Biopharma Mission to support vaccine development. We were awarded a grant for strengthening a GCP-compliant field site in an urban community in Delhi to accelerate Phase II/III COVID-19 vaccine trials in India, in collaboration with Hamdard Institute of Medical Sciences and Research under Mission Covid Suraksha by the Biotechnology Industry Research Assistance Council, Government of India. Our team are trained in clinical trial protocols with quality control and assurance systems and is proficient in fast-tracking site preparation and initiating vaccine trials rapidly in response to infectious disease emergencies. We are building capacity to evaluate tools and solutions for healthcare delivery to communities.



Consenting



Screening



Observation and emergency management

Research projects

- Strengthening of a GCP compliant field site in an urban community in Delhi to accelerate Phase II/III COVID-19 vaccine trials in India in collaboration with Hamdard Institute of Medical Sciences and Research, under Mission COVID Suraksha of National Biopharma Mission (NBM), BIRAC.
- Phase III, observer-blind, randomized, controlled study to evaluate the safety and immunogenicity of a booster dose of COVOVAX in Indian adults
- A Prospective, Multicentre, Randomized, Active-controlled, Observer-blind, Phase II study seamlessly followed by a Phase III study to evaluate the Safety, Tolerability and Immunogenicity of the candidate GEMCOVAC-19 (COVID-19 vaccine) in healthy subjects
- A Phase 2/3, Observer-Blind, Randomized, Controlled study to determine the Safety and Immunogenicity of COVOVAX [SARS-CoV-2 Recombinant Spike Protein Nanoparticle Vaccine (SARS-CoV-2 rS) with Matrix-M1™ adjuvant] in Indian Adults aged ≥18 years and Children aged 2 to 17 years
- A Seamless Phase II/III, Observer-blind, Multi-centre, Randomized Clinical Trial to Evaluate Immunogenicity and Safety of BBV87, an Inactivated Chikungunya Virus Vaccine in Healthy Subjects 12-65 Years of Age
- An open label, randomized, active controlled, multi-centric Phase II/III, study in Indian toddlers and infants to assess the immunogenicity and safety of SIIPL HEXASIIIL™ (DTwP-HepB-IPV-Hib) Vaccine in comparison with SIIPL PENTAVAC (DTwP-HepB-Hib) + Poliovac (IPV) vaccines, administered as separate injections

Epidemiology and Surveillance

CHRD-SAS conducts community-based longitudinal studies as well as hospital-based surveillance to estimate incidence of infectious diseases. A demographic and health surveillance has been established in the urban areas of Dakshinpuri, South Delhi for conducting epidemiology studies of relevant diseases in healthy cohorts to support vaccine development and evaluation in these populations. These efforts are to understand and inform national policy in infectious diseases (burden by aetiology, burden by severity, healthcare usage and access, care-seeking behaviour, physician practices, etc) and to support vaccine development and evaluation.

We also conduct trials that evaluate treatment strategies and interventions to improve outcome in infectious diseases and that reduce the incidence of infectious diseases.



Demographic Health and Surveillance Site



GPS marking



Line-listing

Research projects

- Establishment of a demographic and health surveillance site in an urban resettlement colony in Delhi (Dakshin Delhi Environmental and Epidemiologic Surveillance System for Health and Disease - *DEESHA*) to study disease-specific epidemiology and conduct vaccine trials
- Multicentric prospective cohort study to determine the incidence of Acute Febrile illness (AFI) and sero prevalence of Dengue and Chikungunya viral infections
- Hospital-based surveillance for estimating *Shigella* disease burden and outcomes.
- Understanding pathways to universal health coverage in India: A district-level study in Himachal Pradesh
- Multicentric randomized controlled trial to compare clinical outcomes in infants with possible serious bacterial infection who receive inpatient treatment vs outpatient treatment



IMPLEMENTATION SCIENCE

The focus is to recognize, understand and address health systems and implementation bottlenecks and real-life challenges, identify optimal implementation options for a given setting, and promote uptake of research findings into policy and practice; design innovative delivery strategies to improve coverage, quality, impact, and utilization and; scale up efficacious interventions and effective programs.



Clinical session in the Pediatric ward



SAS team in Haryana for meetings with health officials

Research projects

- Implementation research to promote treatment of pneumonia in under-five children in a north Indian district to achieve high population-based coverage
- Scaling up Anaemia Mukht Bharat in Hodal block of Haryana to improve the status of anemia among pregnant women.
- Implementation Research to Scale-up and Evaluate the Impact of Immediate Kangaroo Mother (iKMC) Care on Newborn Outcomes. The pre-formative research initiated has been initiated. The implementation model will be optimized in the learning district Nuh, which is an aspirational district. The optimized model will be scaled up in 3 districts, Panchkula, Kaithal and Ambala. Several meetings have been conducted with district officers and with DGHS, Chandigarh.



The team with Dr. VK Arand at a training session



Training by Dr. Praveen Kumar at Kalawati Saran Children Hospital, New Delhi

Platform for Research Excellence Related to National Aims (PRERNA) Young Investigators Program



Rukman Manapurath, Barsha Pathak, Archana Thakur
MD, Community Medicine

Three young investigators are enrolled in PRERNA.

Rukman is registered for PhD in Pediatric Nutrition - Childhood Obesity in the project "Effect of community-based nutritional and non-nutritional interventions on childhood obesity in a low-middle-income country: secondary data analysis" under Prof. Tor Strand, Department of Global Public Health and Primary Care, University of Bergen, Norway and Drs. Sunita Taneja and Ranadip Chowdhury, CHRDSAS. He was selected as one of the seven mentees for the American Society of Nutrition (ASN) Early Career Mentoring Program 2022-23 (Second Cohort). The program aims to connect young scientists with established ASN members for mentoring and professional development. His mentor Jennifer Savage Williams, Associate Professor, Director, Center for Childhood Obesity Research, USA (Department: Nutritional Sciences).

Barsha has registered for PhD in Maternal and Child Health -Implementation Science on "Management of pneumonia among under-five children in a low to middle-income country: lessons from population-based research" under Prof. Ingvild Fossgard in the Department of Global Public Health and Primary Care, University of Bergen and Dr. Sarmila Mazumder, CHRDSAS.

Archana is engaged in the project "Healthcare seeking, associated costs and its consequences on household economy in India: an observational cohort study" for her PhD on "Gender inequities in healthcare seeking for childhood diseases and its associated costs- findings from population-based studies in India", under Prof. Kjell Arne Johansson at the Bergen Centre for Ethics and Priority Setting (BCEPS), University of Bergen, Norway and Dr. Sarmila Mazumder, CHRDSAS. She is also pursuing a nine-week certificate course on Modelling cost effectiveness in Healthcare from London School of Economics and Political Science, United Kingdom.

The British Medical Journal Online Training Course in Research Methods

All young investigators completed the BMJ Research to Publication online research methodology and publishing programme. The program aimed to develop research skills and helps researchers to get papers published. The modules were organized into 8 courses, following the research cycle. 1. How to develop and report good research questions; 2. Developing and writing protocols; 3. Choosing the best study design; 4. How to do ethical research; 5. How to write a research paper; 6. The essentials of running a clinical trial; 7. Picking the right journal and getting published and 8. Avoiding scientific misconduct.



SAS, CMC and KEM Young Investigators at the Longitudinal Data Analysis Workshop, Oct 2022

KEY HIGHLIGHTS

Dr. Dilip Mahalanabis (12 November 1934–16 October 2022) was posthumously conferred the Padma Vibushan, the second highest civilian award by the Government of India.



Drs. Susham Gupta and Nita Bhandari at the Padma Award Ceremony and with the SAS team

Dr. Temsunaro Rongsen Chandola completed the WomenLift Health's 2022 Indian Leadership Journey, a BMGF-funded initiative at Stanford University. The program was designed to give talented women leaders the tools – confidence, networks, understanding of barriers – along with peer, mentorship and coaching support to successfully use their voice, expertise and leadership skills for health impact.



Bireshwar Sinha has submitted his PhD Thesis on "Effect of kangaroo mother care in low birth weight infants on breastfeeding performance, gut function, and maternal depressive symptoms in low middle income populations in the Indian subcontinent" to Tampere University, Finland and the PhD defense is scheduled for November 10, 2023

Ravi Prakash Upadhyay also submitted his PhD thesis on "Nutrition, growth and neurodevelopment in children from low resource settings in India" to the University of Bergen, Norway. The PhD defense is planned for September/October 2023.

Groundbreaking research revealed that a package of health, nutrition, psychosocial care, and water, sanitation and hygiene interventions delivered during preconception, pregnancy, and early childhood reduces risk of low birth weight and stunting (Taneja & Chowdhury et al. BMJ. 2022).

WHAT IS ALREADY KNOWN ON THIS TOPIC

Existing evidence suggests the need to expand on preconception, pregnancy and postnatal, maternal, and child health interventions to address the health and development of the next generation.

Maternal, reproductive, and child health, nutrition, and psychosocial care, and water, sanitation and hygiene interventions delivered during preconception, pregnancy, and early childhood reduce the risk of low birth weight and stunting in the next generation.

WHAT THIS STUDY ADDS

This study shows that a package of health, nutrition, psychosocial care, and water, sanitation and hygiene interventions delivered during preconception, pregnancy, and early childhood reduces the risk of low birth weight and stunting in the next generation.

Preconception, pregnancy, and child health, nutrition, and psychosocial care, and water, sanitation and hygiene interventions delivered during preconception, pregnancy, and early childhood reduce the risk of low birth weight and stunting in the next generation.

Renewal of recognition as a Scientific and Industrial Research Organization (valid up to March 31, 2026) by the Department of Scientific and Industrial Research, Government of India.

Redesignation as WHO Collaborating Centre for Research, Community-based Action and Programme Development in Child Health (valid up to April 2027) by the WHO, Geneva.

Drs. Ranadip Chowdhury, Ravi P Upadhyay, Bireswar Sinha, Tarun Choudhary, Barsha Pathak, Rukman Manapurath, Sunita Taneja, Sarmila Mazumder, Tamsunaro Rongsen-Chandola and Nita Bhandari conducted Systematic Reviews of Evidence on the Effects of Micronutrient Supplementation in Low Birth Weight or Preterm Term Infants for the WHO Guidelines Development Group. Systematic reviews and meta-analyses were conducted to summarize available evidence on the effect of different mineral (Iron, Zinc, Calcium and Phosphorus), vitamin (Vitamin A, Vitamin D) and multiple micronutrient supplementation during infancy on mortality, morbidity, growth, and neurodevelopmental development in preterm or LBW infants who are fed mother's own milk or donor human milk. The systematic reviews were published as a supplement (Pediatrics August 2022; 150 Supplement 1) and the WHO recommendations for care of the preterm or low-birth-weight infant were released on the World Prematurity Day on Nov 17, 2022.

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In this Issue
Supplement
Article

Evidence for Global Health Care Interventions for Preterm or Low Birth Weight Infants

Supplement Article

Introduction to Evidence for Global Health Care Interventions for Preterm or Low Birth Weight Infants

See [https://doi.org/10.1542/2022-0001](#)

Abstract View Article PDF

Significance: preterm and low birth weight infants, worldwide, supplementation, breastfeeding

Evidence for Global Health Care Interventions for Preterm or Low Birth Weight Infants: An Overview of Systematic Reviews

See [https://doi.org/10.1542/2022-0002](#)

Abstract View Article Supplementary Data

PDF



Care During Pregnancy and Early Childhood for Growth and Development in Low- and Middle- Income Countries

Topic Editors

Nita Bhandari, Jai Das, Ravi Prakash Upadhyay, Ranadip Chowdhury, Bireswar Sinha, Sunita Taneja

Drs. Nita Bhandari, Sunita Taneja, Ranadip Chowdhury, Bireswar Sinha and Ravi Prakash Upadhyay are Guest Editors for the Research Topic "Care During Pregnancy and Early Childhood for Growth and Development in Low- and Middle- Income Countries" in *Frontiers in Nutrition*. A total of 36 manuscripts were submitted and 17 have been accepted for publication.

The young investigators, Rukman, Barsha and Archana are engaged in Scoping Reviews for the Lancet Citizens' Commission on "Reimagining India's Health System" to lay out the path to achieving universal health coverage in India in the coming decade. These include payment gateways/smart cards enabling access to healthcare in India and use of technology for promoting health education at population level in India for modern medicine and traditional medicine.

Dr. Nita Bhandari is a member of the Stakeholder Group for Australia's National Ageing Research Institute (NARI) project titled Accounting for Diversity: Culturally and Linguistically Diverse (CALD) data variables in health and medical research, funded by the National Health and Medical Research Council of Australia. It aims to develop an extension to the SPIRIT and CONSORT guidelines regarding the inclusion of ethnically diverse participants in clinical trials.

She is a member of the WHO Guideline Development Group (GDG) group to provide updated global guidance on complementary feeding of infants and young children 6 to 23 months of age. She participated in a series of meeting organized by the group.

She is also an ICMR Expert Group Member to evaluate the available evidence and provide guidance on the optimal composition of MMS for the Indian population.

Dr. Sunita Taneja is a member of the WHO GDG to generate guidelines on the prevention and treatment of wasting in infants and children. The guidelines include four overlapping areas of focus including growth faltering/failure in infants younger than six months; moderate wasting in infants and children aged six months and older; severe wasting and oedema in infants and children aged six months and older; and prevention of wasting.

She is also a Member, Project Review Committee for ICMR-AYUSH joint clinical trials on Nutritional Anemia and is also a member of the Scientific Advisory Committee of the ICMR - National Institute for Research in Reproductive and Child Health, Mumbai, Maharashtra.

Dr. Sarmila Mazumder is Member, ICMR Technical Support Group for strengthening the implementation of maternal and newborn health interventions delivery strategies at primary care facilities to achieve high and effective coverage of appropriate antenatal, intrapartum, postnatal care for the mother and newborn care till 6 weeks of life in Northeastern states

Sarmila is a member of WHO Strategic and Technical Advisory Group of Experts for Maternal, Newborn, Child and Adolescent Health and Nutrition (STAGE MNCAH&N). The WHO launched the KMC Global Position Paper and the Implementation Strategy, prepared by the KMC Working Group convened by WHO through STAGE MNCAH&N.

She was selected as a member of the National Scientific Advisory Committee constituted by ICMR to guide various implementation research projects - comprehensive PHC, NCD, reproductive and child health and nutrition, and Anemia Mukh Bharat.

Dr. Temsunaro Rongsen-Chandola is a member of the Expert Group constituted by ICMR to review the 'Consensus Policy on the Ethical Conduct of Controlled Human Infection Studies in India'

Drs. Sunita Taneja, Ranadip Chowdhury and Bireshwar Sinha are a part of the WHO working group for the Risk Stratification Collaborative Study: Meta-analysis to examine risks for newborn and child survival, health and development. The analyses will contribute to the WHO wasting guidelines.

The World Health Organization invited Dr. Harish Chellani to deliver a presentation on "Health, Nutrition, Psychosocial Support, and Water, Sanitation, and Hygiene Interventions Delivered during Preconception, Pregnancy, and Early Childhood Periods on Birth Outcomes and on Linear Growth at 24 Months of Age" for the WHO session on Research to Improve Survival of Small and Sick Newborns: Impact and Implications for Program at the International Maternal Newborn Health Conference held in Cape Town, South Africa from May 8-11, 2023.



Dr. Harish Chellani at the International Maternal Newborn Health Conference, Cape Town, South Africa

COLLABORATORS



National

All India Institute of Medical Sciences, Delhi
Amrita Institute of Medical Sciences and Research Centre, Faridabad
Ambedkar Hospital, Delhi
Batra Hospital and Medical Research Centre, Delhi
BPS Khanpur Medical College Hospital, Haryana
Christian Medical College, Vellore, Tamil Nadu
District Hospital, Sonapat, Haryana
Dr. Dangs Lab, Delhi
DBT/Wellcome Trust India Alliance, Hyderabad
Hamdard Institute of Medical Sciences and Research, Delhi
Indian Council of Medical Research, Delhi
Indian Institute of Technology, Delhi
Kalawati Saran Children's Hospital, Delhi
Kamla Nehru Hospital, Indira Gandhi Medical College, HP
KEM Hospital Research Centre, Maharashtra
Max Superspeciality Hospital, Saket, Delhi
National Institute of Biomedical Genomics, West Bengal
Post Graduate Institute of Medical Research, Chandigarh
Rohtak Medical College, Haryana
St. John's Research Institute, Bangalore, Karnataka
Translational Health Sciences Technology Institute, Haryana
UNICEF, Delhi
Vardhman Mahavir Medical College & Safdarjung Hospital, Delhi



International

Bergen Centre for Ethics and Priority Setting in Health, University of Bergen, Norway
Centers for Diseases Control, Atlanta, USA
University of Bergen, Norway
University College of London, UK
Emory University, USA
Harvard School of Public Health, USA
International Food Policy Research Institute, USA
John Hopkins University, USA
London School of Hygiene & Tropical Medicine, UK
Tampere University, Finland
University College, London, United Kingdom
World Health Organization, Geneva, Switzerland



Amrita Institute of Medical Sciences and Research Centre, Faridabad



Indian Council of Medical Research, New Delhi



VMMC & Safdarjung Hospital, New Delhi



Meeting with researchers from the University of Bergen, Norway



BRANCH Investigators' Meeting, WHO, Geneva

KEY COLLABORATIONS

WHO Collaborating Centre for Research, Community-based Action and Programme Development in Child Health

Being a WHO CC, has endowed us with better research opportunities through collaborative research and linkages with other research organizations. It has also paved way for capacity building of the researchers, especially of the young investigators.

The research projects conducted by CHRD-SAS are of national importance and aligned to WHO's research agenda. CHRD-SAS has completed numerous research projects in collaboration with WHO and is currently involved in 6 projects and several others are in pipeline.

SAS was recently redesignated as a WHO Collaborating Centre for 4 years, valid up to April 2027 after rigorous screening and selection process.

Hamdard Institute of Medical Sciences and Research and associated Hakeem Abdul Hameed Centenary Hospital (HAHCH)

SAS has a long-term Memorandum of Understanding with HAGCH to pursue collaborative research in clinical research, disease biology, epidemiology, development and evaluation of tools for diagnosis, prevention and treatment and development of community- based interventions to reduce neonatal and childhood morbidities and mortality.

The collaboration has strengthened over the past few years and the institutions were jointly awarded a DBT grant under "Mission COVID Suraksha" for strengthening and capacity building to conduct of COVID vaccine trials in the country. A dedicated Clinical Research Centre has been set up in 1500 sq ft area in the hospital premises wherein all vaccine trial activities like participant consenting, eligibility assessment and vaccine administration are conducted.

Amrita Institute of Medical Sciences and Research Center, Greater Faridabad, Haryana

CHRD-SAS and Amrita Institute of Medical Sciences and Research Center (AIMSRC), Greater Faridabad, Haryana signed a Memorandum of Understanding for Collaborative research to achieve holistic health for women and children and accelerate scale up of efficacious interventions.



Memorandum of Understanding: CHRD-SAS, New Delhi and AIMSRC, Faridabad, Haryana, October 10, 2022

Dr. Dangs Lab

In addition to project-specific agreements, SAS and Dangs Lab executed an overarching agreement that establishes the general framework of intended collaboration for promoting and conducting research.

The purpose of the MoU is to optimize complementary strengths in conducting rigorous epidemiological studies (CHRD-SAS), performing cutting-edge laboratory experimental tests (Dr.Dangs Lab) to bridge the gap between basic biologists and clinical public health researchers. The collaboration provides common platform for collegial discussions, development of linkages to generate solutions to improve women/maternal and child survival, growth and development through research including but not limited to clinical research, randomized controlled trials, implementation research, and analyses to generate evidence and improve intervention delivery, to scale up proven interventions and incorporate recent evidence-based innovations in intervention delivery and process.



Drs. Nita Bhandari and Navin Dang signing the MoU



SAS and Dangs Lab Teams



Drs. Arjun Dang, Leena Chatterjee and Nidhi Goyal with the team members

State Government of Haryana

Memorandum of Understanding for Collaboration in Implementation Research and Intervention Scale Up for Accelerated Decline in Child Mortality and Improved Child Growth and Development.

SAS has been allotted a floor in the sub-divisional hospital in Hodal block of Palwal district, Haryana for on of the research project. The research team, data management team and all study activities including organization of trainings are carried out from the hospital.



Inauguration of USG facility in the hospital



USG by study obstetrician



Organization of Community meeting



Sub Divisional Hospital, Hodal



SAS team with Haryana District Health authorities

State Government of Himachal Pradesh

Project-specific collaborations with hospitals

Strengthening of health systems with government

After the recent groundbreaking work which revealed that a package of health, nutrition, psychosocial care, and water, sanitation and hygiene interventions delivered during preconception, pregnancy, and early childhood reduces risk of low birth weight and stunting, NITI Aayog and the state government is keen to scale up WINGS interventions in Himachal Pradesh.

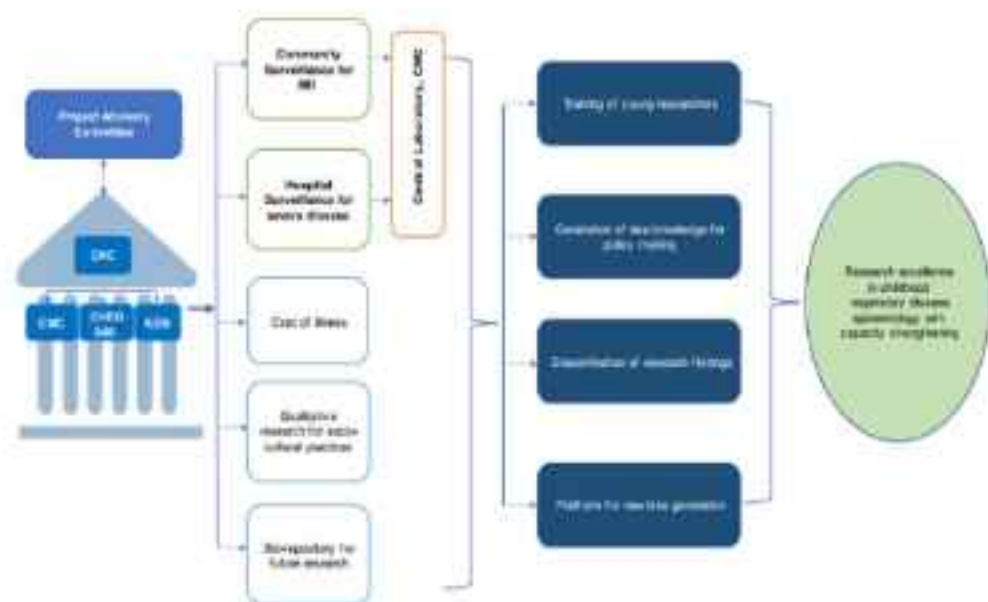


SAS team's visit to Himachal Pradesh to meet state health authorities.



NEW GRANTS

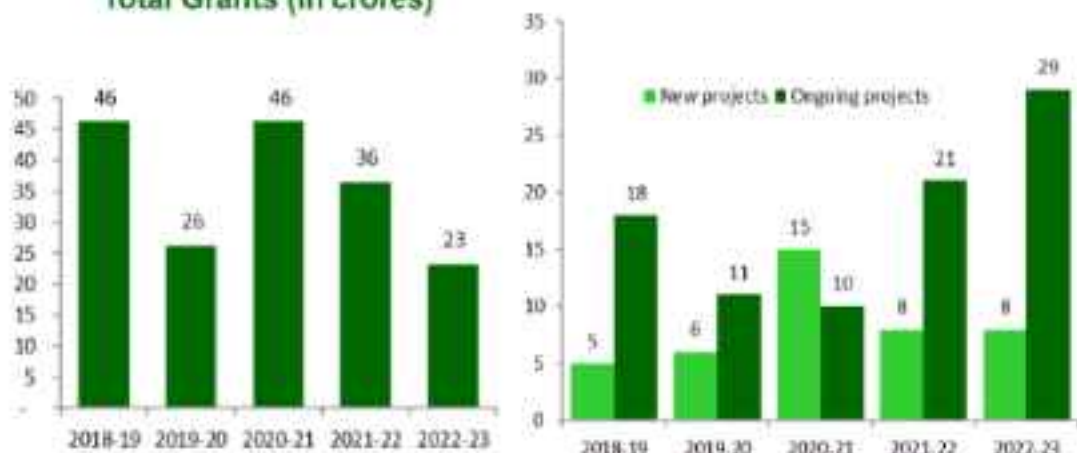
- Secured funding for the project "A collaborative network on respiratory disease epidemiology in India and capacity building (RespIND-Net)" from DBT/Wellcome Trust India Alliance. The partners include CMC, Vellore and KEM Hospital Research Centre, Pune, Maharashtra.



Conceptual Framework for RespIND-Net

- Exploring interrelationship between linear growth, body composition and metabolic syndrome in pre-school children: a population-based cohort in North India approved for funding by the Department of Biotechnology
- Longitudinal follow-up of children after standard treatment regimen to find recurrence rates of anemia and effective treatment strategies among non-responders to IFA treatment by ICMR
- Prevalence of anemia by causes and severity in different age groups in India: an in-depth data analysis on published and unpublished data using snowballing technique by ICMR

Total Grants (in crores)



MEETINGS, TRAININGS, WORKSHOPS

Training on Breastfeeding Counselling using the WHO Infant and Young Child Feeding Training Material, March 2023. The WHO Consultant, Carol Williams, Course Leader, Health Promotion at University of Brighton conducted two weeks course on training of trainers and project team in. Besides, classroom sessions, the course included clinical sessions, which were conducted in the antenatal and postnatal wards of the Department of Obstetrics and Gynaecology at Safdarjung Hospital.



BRANCH team with Carol Williams

Drs. Tamsunaro Rongsen-Chandola, Nidhi Goyal, Piyush Gupta and Dr. Vindo Sangal, DPO Sirmaur attended the Second District Cases Workshop for the District Case Study to Understand Pathways held at Indian Institute of Management, Bangalore from March 23-24, 2023.

Rukman Manapurath attended the Lancet Summit: Childhood Obesity Online Meeting, March 2023.

Breastfeeding Promotion Network of India's Certificate Course on "Breastfeeding & Infant and Young Child Feeding Counsellors" by Gunjan Agarwal in February 2023.

Tarun Shankar Choudhary and Archana Thakur attended the EQUIFINANCE Project, a collaborative meeting THSTI, CHRDSAS and Bergen Centre for Ethics and Priority Setting in Health, University of Bergen, Norway in Puducherry, January 2023.

Medha Shekhar attended the Regional Workshop to build the capacity of selected Collaborating Centers on Preventing and Responding to Sexual Exploitation, Abuse and Harassment (PRSEAH) in the South-East Asia Region organised by WHO in December 2022.

Archana Thakur attended Understanding Public Health Nutrition Policy and Action, organised by Public Health Foundation of India, December 2022.

Barsha Pathak attended the course on Introduction to implementation science in global health conducted by CISMACH, November-December 2022.

Rukman Manapurath participated in the Biostatistics Consortium organized by the National Academy of Medical Sciences, Delhi, India, November 2022.

Barsha Pathak attended the online course on Fundamentals of Implementation Science by the Washington University, September 2022.

Dr. Nidhi Goyal, Alok Arya and Sudarshan Mundra attended a Bridging Workshop on CSR Grants to Strengthen Academia-Industry Partnership, organized by Delhi Effective Education cluster (DeepC) at INSA Delhi, August 24, 2022.

Alok Arya attended the "Systematic Review Workshop" organized by Indian Institute of Public Health, Gandhinagar from May 10-13, 2022.

Dr. Tamsunaro Rongsen-Chandola participated in the Delhi Public Health Conclave hosted by the Department of Community Medicine, Hamdard Institute of Medical Sciences and Research (HIMSR), New Delhi on March 4, 2022. She served as a panellist for "Pathways of Public Health Career".



MEETINGS, TRAININGS, WORKSHOPS

Winter School on Epidemiological and Genomic Methods for Study of Human Diseases from November 28 - December 3, 2022: CHRDS-SAS in collaboration with National Institute of Biomedical Genomics (NIBMG), West Bengal conducted a workshop for young clinical researchers, basic scientists engaged in research on biomedical sciences. The intent of the course was to empower young researchers in methods of epidemiology, both clinical and genetic. The topics covered included Study designs, Measures of occurrence, Probability distributions, Sampling, writing PICO questions, Hypothesis testing, Sample size determination, Measurement in research: qualitative and quantitative, Analyses of qualitative and quantitative data, Genetic epidemiological methods for observational and case-control studies, Methods of interventional studies and clinical trials.



Longitudinal Data Analysis Workshop, October 2022: The aim was to introduce the concept of longitudinal data and its analysis using statistical software (Stata and R). Around 30 participants including young investigators from the three PRERNA partners attended the workshop. The course faculty included Dr. Tor A Strand from University of Bergen and Drs. Ingrid Kvestad, Kyrre Brevik and Sondre Nilsen from the Norwegian Research Center. An opportunity for hands on analysis of longitudinal data sets was provided by the experts followed by presentation and discussions.

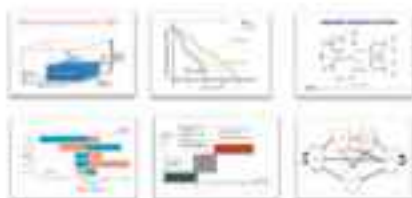


In April 2022, Ravi Prakash Upadhyay and Kiran Bhatia attended a course on conceptual foundations of Epidemiologic Study design and Analysis organized by the Centre for Intervention Science in Maternal and Child Health (CISMAC), University of Bergen, Norway. Ranadip Chowdhury, Bireswar Sinha, Ravi Prakash Upadhyay and Tarun Shankar Choudhary were webinar facilitators.



PRERNA Science Workshop on Economic Evaluation in Healthcare: SAS organised a two-day virtual workshop for the young investigators, Senior Scientists and Scientists at all partner institutes, researchers and faculties from Translational Health Sciences and Technology Institute and Pondicherry Institute of Medical Sciences. The speakers included eminent experts in the field of Health Economics from Bergen Centre for Ethics and Priority Setting in Health, University of Bergen, Norway and Health Intervention and Technology Assessment Program (HITAP), Thailand. This two-day virtual workshop covered basic concepts of economic evaluation, discussions and reflections from Q & A sessions to develop capacity in the domain of economic evaluation particularly alongside RCTs/studies.

Economic Evaluation in Healthcare Workshop



19th - 20th April, 2023



Workshop on operationalization of Maternal-Newborn Intensive Care Unit (M-NICU) in Amrita Hospital, Faridabad, Haryana

As a part of the Phase -I plan to establish M-NICU at Amrita Hospital, SAS successfully conducted the workshop on Operationalization of MNICU on June 29, 2023. The workshop was attended by the nursing staff (labour room and NICU), and doctors from the Departments of Obstetrics & Gynecology and Pediatrics at the hospital.

The faculty included Drs. Harish Chellani from SAS, Sugandha Arya from Safdarjung Hospital, Nitya Wadhwa from Translational Health Sciences and Technology Institute, Faridabad. Besides, Dr. Sarmila Mazumder, Neeta Dhabhai and Tarun Kumar participated in the workshop. The training would facilitate setting up the MNICU facility in the hospital.



Dr. Harish Chellani's presentation on M-NICU



Dr. Harish Chellani presenting the M-NICU Toolkit to Dr. Sanjeev Singh, Director, Amrita Hospital



Hands-on Training at the Workshop

INFRASTRUCTURE

Our Offices

Different teams continue to operate out of our offices based at different locations in Delhi-NCR.

Research Coordination and Management Support Office in Kalu Sarai, New Delhi: Around 9000 sq ft built up area spread over 5 floors for senior management, scientists, data management, accounts, HR and administrative teams.



Clinical Science Centre , Devli, New Delhi 15,000 sq ft built-up area for screening, enrollment, randomization, assessment, collection and storage of biological specimens, patient monitoring and outpatient care for evaluation of vaccines and diagnostics and other health care technologies. This office is also the base for all teams working in urban areas in Delhi.

Population Science Research Centre in Palwal, Haryana: Around 17500 sq ft built-up area in Tatarpur, District Palwal for teams working on population science studies and major intervention trials in Haryana.

Also houses a 1320 sq ft archival facility with indexed and restricted access.



Data Management Centre

Real-time cloud-based data management using tablets and mobile phones with GCP and regulatory compliant processes, web-based electronic tracking of patient management and compliance

Fully equipped for database management of own research data and experienced in management and coordination of multicenter and multisite data management.

Specialized systems for security, fire safety, restricted access server rooms as per global standards



Geographical Information System Lab

Equipped with high processing desktop to enable processing and storage of spatial data, with Basic version of ESRI ArcMap 10.8 installed for the real time mapping using NRSC cartosat3 data. GIS integrated demographic health surveillance will provide high resolution spatial data for the development and understanding of health and socio-economical conditions in the population.

Infant and Child Cognition Assessment Lab

The laboratory hosts a battery of psychometric tests such as Bayley's Scale of Infant and Toddler Development, Ages and Stages Questionnaire, Global Scale for Child Development.

In addition, there is a dedicated room with custom-made walls of monochromatic dimout fabric, a 19-inch computer and a screen-based Tobii X2- 60 eye tracker (Tobii Technology, Stockholm, Sweden) for eye tracking assessments in enrolled children. The objective is to understand the strength of association of these eye tracking parameters with neurodevelopmental outcomes at 24 months of age, assessed by Bayley Scales of Infant and Toddler Development (BSID).



Clinical and Research Laboratories, SAS (CRL-SAS)

CRL-SAS is a Good Clinical Laboratory Practices compliant research lab that supports ongoing research studies at CHRDSAS through specimen collection at home, study clinic or laboratory, processing, storage and transportation as per project requirements. The Institutional Bio-Safety Committee oversees the environmental and occupational health and safety aspects of the functioning of the laboratory. As a part of the Government of India's DRIVEN project, the lab successfully underwent environmental and safety due diligence in 2022.

The lab was audited by an independent auditor for safety measures and was declared compliant for facility design, good safety practices, personnel training and awareness, fire, electrical, chemical, equipment and environment safety, waste management and emergency response plan, stems for home and lab collection of samples, processing, quality control and storage.

Designated areas for specimen receiving and processing, bacteriology, immunology, hematology, biochemistry, documentation, washing, sterilization, vaccine storage, biospecimen storage and biomedical waste management area.

Over the years, the lab has developed a rich repository of biospecimens including serum from mothers and infants, breast milk from lactating mothers and saliva from mother infant pairs at several time points. These are stored in liquid nitrogen storage tanks and -80°C deep freezers, at different facilities under strict temperature-controlled conditions.



ORGANIZATIONAL BOARD AND COMMITTEES

Board of Governors

Nita Bhandari, President
Ramanjit Kaur Johal, Vice President
Rahul Khare, Secretary
Manju Bagdwal, Assistant Secretary
TS Rao, Treasurer
Partha Majumder, Member
Temsunaro Rongsen-Chandola, Member

Scientific and Program Advisory Committee

Dr. NK Ganguly (Co-chair), Former Director General, Indian Council of Medical Research, New Delhi
Dr. Partha P Majumder (Co-chair), National Science Chair (Scientific Excellence), Government of India & Distinguished Professor, John C Martin Centre for Liver Research & Innovations, Kolkata
Dr. Anura Kurpad, Professor, Department of Physiology, St. Johns Research Institute, Bengaluru
Dr. Beena Koshy, Professor, Developmental Pediatrics, Christian Medical College, Vellore
Dr. B Sesikeran, Former Director, ICMR - National Institute of Nutrition, Hyderabad
Dr. CS Yagnik, Director, Diabetes Unit, KEM Hospital and Research Centre, Pune
Dr. Hemalatha R, Director, ICMR - National Institute of Nutrition, Hyderabad
Dr. Pavitra Mohan, Co-Founder and Director, Basic Health Care Services, Udaipur
Dr. Pratima Ray, Retired Professor, Department of Biotechnology, Jamia Hamdard, New Delhi
Dr. Rajat Goyal, Country Director, IAVI, New Delhi
Dr. RM Pandey, Former Senior Professor & Head, Department of Biostatistics & Professor In-charge, Clinical Epidemiology Unit, All India Institute of Medical Sciences, New Delhi
Dr. Satinder Aneja, Professor, Department Pediatrics, Sharda University, Greater Noida
Dr. Siddharth Ramji, Former Director - Professor (Pediatrics and Neonatology), Maulana Azad Medical College, New Delhi
Dr. T Ramamurthy, INSA Senior Scientist, ICMR - National Institute of Cholera and Enteric Diseases, Kolkata

Internal Complaints Committee

Nita Bhandari
Medha Shekhar
Ravi Prakash Upadhyay
Pradeep Kumar
Swati Naik
Anisha Banerji, Independent Member
Savita Sapra, Independent Member

Child Protection Committee

Nita Bhandari
Tarun Shankar Choudhary
Swati Naik
Rahul Khare, Independent Member
Savita Sapra, Independent Member



Scientific and Program Advisory Committee Meeting
August 26, 2022

Ethics Review Committee

CHRD-SAS Ethics Review Committee is registered with the Department of Health Research (DHR), Ministry of Health and Family Welfare (MoHFW), Government of India (EC/NEW/INST/2022/DL/0140 valid up to August 2027).

The committee is constituted and functions in accordance with the ICMR National Ethical Guidelines for Biomedical and Health Research Involving Human Participants, 2017.

Twelve full committee and expedited proposal reviews were conducted during the year 2022-2023.

The list of members is as follows:

- Dr. Binoo Nayar (Chairperson - Clinician), Senior Chief Medical Officer, School Health Services, Central Zone, Municipal Corporation of Delhi
- Dr. Sarmila Mazumder (Member Secretary), Senior Scientist, Centre for Health Research and Development, Society for Applied Studies, New Delhi
- Dr. Rajat Goyal (Basic Medical Scientist), Country Director (India), International AIDS Vaccine Initiative, New Delhi
- Prof. Pratima Ray (Basic Medical Scientist), Professor, Department of Biotechnology, Jamia Hamdard, New Delhi
- Dr. Jeeva Sankar (Basic Medical Scientist), Additional Professor, All India Institute of Medical Sciences (AIIMS), New Delhi
- Dr. Satinder Aneja (Clinician), Former Director-Professor & Head, Department of Pediatrics, Lady Hardinge Medical College, Delhi
- Colonel Gian Sagar (Legal Expert), Retired Army Officer
- Mrs. Medha Shekhar (Legal Expert), Coordinator, Centre for Health Research and Development, Society for Applied Studies, New Delhi
- Dr. Rajib Dasgupta (Social Scientist), Professor and Chairperson, Centre of Social Medicine and Community Health, Jawaharlal Nehru University, New Delhi
- Dr. Sanghmitra Acharya (Social Scientist), Professor, School of Social Science, Jawaharlal Nehru University, New Delhi
- Mrs. Runa Ghosh (Social Scientist), Senior Research Assistant, Centre for Health Research and Development, Society for Applied Studies, New Delhi
- Mrs. Girija Sapra (Community Representative), Retired Teacher, Manava Bharati India International School, New Delhi
- Mrs. Kiran Kanda (Community Representative), Teacher, Manava Bharati India International School, New Delhi

Institutional Committees

CHRD-SAS has constituted institutional committees to streamline the organizational policies and procedures and provide guidelines for decision making processes. The committees include:

- Human Resources
- Institutional Biosafety Committee
- Travel and Transportation Committee
- Technical and Purchase Committee
- Finance, Administrative and Legal: Advise is sought from independent experts whenever required.

CHRD-SAS has formulated clear and well-written policies and procedures to ensure transparency and accountability including internal and external audits.

OUR TEAMS

There are research groups around each scientific program. These programs are led by investigators (MD, MPH, PhD) supported by skilled research associates who are responsible for the field operations and implementation. There are in built quality control systems in place as well as quality assurance checks, Research groups link with partner hospitals or laboratories depending on the need. The data management centre is compliant with regulatory guidelines.



INTERNSHIP PROGRAM

We offer short term internships to students from different streams.

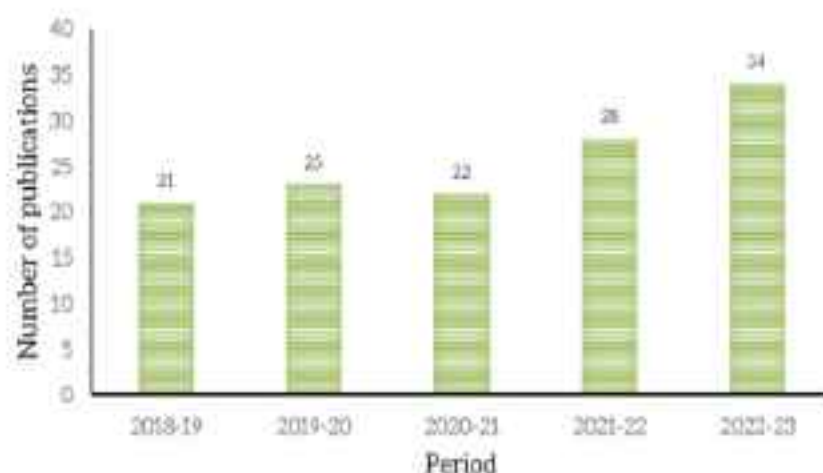
The following students completed two-months internship during the year.

Mansi Rajput, Bachelor in Pharmacy, Indian Institute of Public Health Gandhinagar, Gujarat.
Ghazala Saifi, Bachelor in Emergency and Trauma Care and Shama Arzu, Bachelor in Unani Medicine and Surgery, HIMSR, New Delhi



Intern from HIMSR with
Dr. Chandola and Ms. Nair

RESEARCH PUBLICATIONS IN PEER-REVIEWED JOURNALS



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- Manapurath R, Strand TA, Chowdhury R, Kvestad I, Yajnik CS, Bhandari N, Taneja S. Daily Folic Acid and/or Vitamin B12 Supplementation Between 6 and 30 Months of Age and Cardiometabolic Risk Markers After 6-7 Years: A Follow-Up of a Randomized Controlled Trial. *J Nutr*. 2023 Mar 6;S0022-3166(23)35282-9. doi: 10.1016/j.tjnut.2023.03.003.
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- Khara T, Myatt M, Sadler K, Bahwere P, Berkley JA, Black RE, Boyd E, Garenne M, Isanaka S, Lelijveld N, Taneja S, West KP, Briand A. Anthropometric criteria for best-identifying children at high risk of mortality: a pooled analysis of twelve cohorts. *Public Health Nutr*. 2023 Feb 3;26(4):1-17. doi:10.1017/S136898002300023X.
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- Taneja S, Chowdhury R, Dhabhai N, Upadhyay RP, Mazumder S, Sharma S, Bhatia K, Chellani H, Dewan R, Mittal P, Bhan MK, Bahl R, Bhandari N; WINGS Study Group. Impact of a package of health, nutrition, psychosocial support, and WaSH interventions delivered during preconception, pregnancy, and early childhood periods on birth outcomes and on linear growth at 24 months of age: factorial, individually randomised controlled trial. *BMJ*. 2022 Oct 26;379:e072046. doi:10.1136/bmj-2022-072046.
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- Katole A, Naik G, Kujur A, Kumar M. Performance Appraisal of Nutritional Rehabilitation Centers in Central India: A Retrospective Facility-Based Descriptive Study. *Indian J Community Med*. 2022 Apr-Jun;47(2):272-276. doi:10.4103/ijcm.ijcm_776_21.
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RESEARCH

Impact of a package of health, nutrition, psychosocial support, and WaSH interventions delivered during preconception, pregnancy, and early childhood periods on birth outcomes and on linear growth at 24 months of age: factorial, individually randomised controlled trial

Santa Taneja,¹ Ranodil Chowdhury,² Neeta Ghoshal,³ Ran Pokamli Upadhyay,⁴ Samira Alomoudi,⁵ Sarani Sharma,⁶ Khar Shaha,⁷ Harish Chitka,⁸ Rajul Dewan,⁹ Pratima Wital,⁷ Mh Shan,⁷ Ajay Sahi,⁸ Nita Ghoshal,⁷ on behalf of the WINGS Study Group

Preconception and periconception interventions to prevent low birth weight, small for gestational age and preterm birth: a systematic review and meta-analysis

Ujjwala Prasad,¹ Ranodil Chowdhury,² Santa Taneja,³ Nita Ghoshal,⁴ Ayesha De Costa,⁵ Rajiv Bhat,⁶ Wafiq Fawzi⁷

Community Structure and Engagement Strategies in Scaling Up Demographic Development and Developmental Surveillance Systems: A Multi-Site Report from India

1 Department of Community Health, All India Institute of Medical Sciences, New Delhi, India
 2 Department of Community Health, All India Institute of Medical Sciences, New Delhi, India
 3 Department of Community Health, All India Institute of Medical Sciences, New Delhi, India
 4 Department of Community Health, All India Institute of Medical Sciences, New Delhi, India
 5 Department of Community Health, All India Institute of Medical Sciences, New Delhi, India
 6 Department of Community Health, All India Institute of Medical Sciences, New Delhi, India
 7 Department of Community Health, All India Institute of Medical Sciences, New Delhi, India
 8 Department of Community Health, All India Institute of Medical Sciences, New Delhi, India
 9 Department of Community Health, All India Institute of Medical Sciences, New Delhi, India

BMC Pregnancy and Childbirth

STUDY PROTOCOL

Postpartum contraceptive practices among urban and peri-urban women in North India: a mixed-methods cohort study protocol

Neelam K. Aggarwal,¹ Rajiv Bhat,² Neeta Ghoshal,³ Ran Pokamli Upadhyay,⁴ Samira Alomoudi,⁵ Sarani Sharma,⁶ Khar Shaha,⁷ Harish Chitka,⁸ Rajul Dewan,⁹ Pratima Wital,⁷ Mh Shan,⁷ Ajay Sahi,⁸ Nita Ghoshal,⁷ on behalf of the WINGS Study Group

Maternal nutritional status and milk volume and composition in India: an observational study

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Effects of kangaroo mother care on neonatal and maternal health: systematic review and meta-analysis

Ranjiv Bhat,¹ Ujjwala Prasad,² Ranodil Chowdhury,³ Neeta Ghoshal,⁴ Ran Pokamli Upadhyay,⁵ Samira Alomoudi,⁶ Sarani Sharma,⁷ Khar Shaha,⁸ Harish Chitka,⁹ Rajul Dewan,¹⁰ Pratima Wital,¹¹ Mh Shan,¹² Ajay Sahi,¹³ Nita Ghoshal,¹⁴ on behalf of the WINGS Study Group

BMC Pediatrics

RESEARCH

Early child stimulation, linear growth and neurodevelopment in low birth weight infants

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Enteral Multiple Micronutrient Supplementation in Preterm and Low Birth Weight Infants: A Systematic Review and Meta-analysis

Ujjwala Prasad,¹ Ranodil Chowdhury,² Neeta Ghoshal,³ Ran Pokamli Upadhyay,⁴ Samira Alomoudi,⁵ Sarani Sharma,⁶ Khar Shaha,⁷ Harish Chitka,⁸ Rajul Dewan,⁹ Pratima Wital,¹⁰ Mh Shan,¹¹ Ajay Sahi,¹² Nita Ghoshal,¹³ on behalf of the WINGS Study Group

Original Research

Effect of kangaroo mother care initiated in community settings on financial risk protection of low-income households: a randomised controlled trial in Haryana, India

Neeta Ghoshal,¹ Ranodil Chowdhury,² Samira Alomoudi,³ Ujjwala Prasad,⁴ Santa Taneja,⁵ Rajiv Bhat,⁶ Wafiq Fawzi,⁷ Harish Chitka,⁸ Rajul Dewan,⁹ Pratima Wital,¹⁰ Mh Shan,¹¹ Ajay Sahi,¹² Nita Ghoshal,¹³ on behalf of the WINGS Study Group

Burden of typhoid and paratyphoid fever in India

Jacob John, M.D., Ph.D.¹, Ashish Bhardwaj, D.N.B.¹, Tejaswani Rangar-Chandola, Ph.D.², Shashi Datta, M.D., Ph.D.³, Madhu Gupta, M.D., Ph.D.⁴, Sameer Katarung, Ph.D.⁵, Suresh Singh, M.D.⁶, Manikandan Srinivasan, M.D.⁷, Anika Srinivasulu, M.P.H.⁸, Adresh Bhand, M.P.H.⁹, Anika Singh, M.D.¹⁰, Roshini M. Kashy, M.D.¹¹, Debasmitra R. Jaha, M.D.¹², Matthew S. Thomas, M.D.¹³, Aron P. Alexander, M.D.¹⁴, Shujin Tranterang, M.D.¹⁵, Shweta S. Eberstler, M.D.¹⁶, Arun S. Karthikeyan, Ph.D.¹⁷, Dilip Kumar, M.P.H.¹⁸, R. N Swathi, M.D.¹⁹, Roelina Raja, M.D., M.P.H.²⁰, Nikhil Sahni, B.Tech.²¹, Basu Veerasinghavan, M.D., Ph.D.²², Manoj V. Muthaiah, M.D.²³, Venkata R. Mahan, M.D.²⁴, Shilpa K. Ratanjan, M.D., Ph.D.²⁵, Karthikeyan Ramarajasek, Ph.D.²⁶, Preetha Samuel, Ph.D.²⁷, Nathan C. Lu, M.D., Ph.D.²⁸, Jason Andrew, M.D.²⁹, Nicholas C. Gensky, D.Phil.³⁰, Gopandey Kang, M.D., Ph.D.³¹, WIDEPH team

COMMUNITY ENGAGEMENT

As a part of the community outreach activity for the Demographic and Health Surveillance (DHS) project, a health camp was organized with support from Mrs. Rekha Sankla, the local counselor of Dakshinpuri, HIMSR and HAHC Hospital with assistance from the Centre for Health Research and Development, Society for Applied Studies (CHRD-SAS), New Delhi. The health camp was conducted on May 14, 2022 in the MCD Park, H Block, Dakshinpuri, New Delhi.

The purpose of the camp was to provide preventive and curative services to the community and generate awareness about non-communicable diseases. The target population were children, adolescents, women of reproductive age group, pregnant and lactating women and elderly males/females. It included a Health Talk on 'Non communicable diseases: causes, symptoms and prevention' to generate awareness regarding the common non communicable diseases; screening for Diabetes Mellitus, Hypertension and Anemia and; General and Pediatrics outpatient services.



ENVIRONMENTAL INITIATIVES

We have started taking small, yet impactful steps towards becoming an environment-friendly organization.

From replacing plastic cups and plates with eco-friendly and biodegradable ones and collecting and sending plastic for recycling, we are doing our best to eradicate plastic from the SAS ecosystem.

The E-waste generated from obsolete electronic and not-usable equipment and gadgets is sent to recyclers by IT and administrative team without posing a threat to the environment.

The kitchen waste generated in the in-house mess is used to make vermicompost, which is then added to the plants in our office. We decided to go green by planting trees on the premises of our Devli office.

The SAS family is contributing to building a people and planet friendly organization. Our 'eco-friendly' claims include certificates from e-waste and plastic waste recyclers.



E-Waste Management



Collection of plastic waste for recycling



Vermi-composting



Greenery at workspace

