



ANNUAL REPORT

2022-23





Message from the Director

As we conclude another extraordinary year, I am privileged to communicate with you through this message as the Director of the Centre for Public Health Research (CPHR). I am delighted and filled with excitement to present our collective achievements, significant events, and the culture of creativity that has characterized our institution throughout the previous year. In our relentless pursuit of excellence, we have continuously pushed the limits of knowledge, achieving notable progress in our mission to carry out research, evaluation, and systematic reviews pertaining to public health with an objective to advance and safeguard the health and well-being of individuals residing in low- and middle-income countries. We have remained steadfast in our dedication to innovative research and the exploration of new findings, and I am delighted to announce that our endeavors have yielded ground-breaking results.

A distinguishing characteristic of our organization is the persistent cooperation mentality that is evident in every project we embark upon. The researchers have consistently collaborated effectively, creating an atmosphere that promotes originality and interdisciplinary cooperation. Our work has been greatly advanced by our collective dedication, resulting in significant milestones. Upon examining every aspect of this year's annual report, you will discover strong evidence of our influence, not only inside the academic and research spheres but also within the wider societal framework. Our commitment for promoting knowledge and making a beneficial impact on the world is evident in our various projects, ranging from initiatives focused on Tobacco measures to the establishment of a new wing, the People Science Centre (PSC).

We have a clear vision for the future. With dedication and curiosity, we will keep pushing the boundaries of our research, adding to the corpus of knowledge worldwide and tackling some of the most important issues of today.

Thank you for being an integral part of our journey.

A handwritten signature in green ink that reads "Nirmalya Mukherjee". The signature is written in a cursive, flowing style.

Dr. Nirmalya Mukherjee, PhD.
Director



About us



Manbhum Ananda Ashram Nityananda Trust (MANT) set up a research wing in 2017 and Centre for Public Health Research (CPHR) was officially inaugurated in 2022. The research studies conducted by the centre are extensive, covering both primary and secondary studies..

CPHR has been recognized as a JBI Affiliate centre specializing in “Evidence Synthesis and Implementation for Indigenous Health” which is the first of its kind in the world to focus on Evidence Synthesis and Evidence Implementation on Indigenous Health.

CPHR’s team members have expertise across primary and secondary research, implementation research, community trials, health economic modelling and simulation, and health technology assessment, along with its ongoing activities related to evidence synthesis.

It focuses on the implementation of health-related initiatives with support from the Government of India and State Governments, UN agencies, international development agencies/ organizations, and both national and international academic and research institutions encompassing research in areas such as Tobacco Control, Tribal Health, One Health, Health Economics, and Health Technology Assessment.



Our mission



Our first and main mission is to conduct research, evaluation, and systematic reviews which is related to public health. The Centre aims to bring both quantitative and qualitative evidence in order to promote and protect the health and well-being of people living in low- and middle-income countries (LMICs), as well as to avoid diseases and morbidities. This will be accomplished through the generation and dissemination of new knowledge and information concerning infectious and non-communicable diseases, indigenous health, one health, environmental health, socio-economic determinants of health, and methods of health surveillance.

In addition, policy-focused research will also be a component of the center's activities.



Our vision



The Centre for Public Health Research's (CPHR) main vision is to promote the health and well-being of vulnerable communities through research and development initiatives. In addition, we place a strong emphasis on the promotion of the voices, choices, and identities of the people in general and indigenous people in particular





The Year Gone By ...



Tobacco Control



MANT has been actively involved in successful tobacco control initiatives in West Bengal since 2005, earning recognition as the Best NGO in Tobacco Control at the 5th National Conference on Tobacco or Health in 2021. Simultaneously, CPHR, supported by the International Union Against Tuberculosis and Lung Disease, has focused on three key research endeavors pertaining to tobacco in India. These include investigating the Return on Investment of Tobacco Control, assessing the economic impact of tobacco use, and estimating the accumulation of tobacco waste in India over the last century. Together, these efforts reflect a comprehensive approach by both organizations, addressing the immediate challenges of tobacco consumption through MANT's on-the-ground initiatives and delving into the broader societal and economic aspects of tobacco use through CPHR's research endeavors.

CPHR conducted three studies with support from Johns Hopkins University, USA

1. Post-implementation Assessment of Compliance with Tobacco Product Display and Point-of-Sale Tobacco Control Policies Siliguri, India from November 2022 to January 2023
2. Tobacco Litter Assessment in Kolkata from May to August 2022
3. Tobacco Litter Assessment in 9 cities in India from September 2022 to January 2023

CPHR is the recipient of the STOP Grant managed by Vital Strategy, USA and has been implementing a study on Bidi Rolling in Madhya Pradesh and West Bengal from 1st November 2023.

CPHR has also conducted a mapping of Tobacco Vendors in the city of Kolkata with support from Healis Sekhsaria Institute for Public Health, Mumbai (2021-2023)

One Health

CPHR builds strong partnerships in India and other low- and middle-income countries and approaches research for control and prevention of zoonotic and emergent infectious diseases and other One Health issues in a strategic, targeted manner. These are the few projects which we are involved

- Cost analysis of implementation of pre-exposure prophylaxis strategy to avert rabies among children in India. Royal, A., John, D., Bharti, O., Dhupar, D., Diksha, Padmawati, R.S., & Utarini, A. (2023).
- A Cost-effectiveness analysis of pre-exposure prophylaxis strategy to avert rabies deaths in school-aged children in India. Royal, A., John, D., Bharti, O., Tanwar, R., Bhagat, D.K., Padmawati, R.S., Chaudhury, V., Umapathi, R., Bhadola, P., & Utarini, A. (2023)

Health Technology Assessment Research

Currently, the CPHR team, which possesses proficiency in economic modeling, epidemiology, clinical trials, and biostatistics, is engaged in several projects that seek to generate empirical data that can guide policy-making and practical application in the domains of health services and digital health technologies.

EVIDENCE SYNTHESIS

Involves systematic reviews, scoping reviews, meta-analysis, network meta-analysis, economic evidence, and evidence and gap maps.

Since the official recognition of CPHR as a JBI affiliate centre, it has conducted many works in evidence synthesis and evidence implementation by following their methodology. We are constantly trying to make a fruitful impact in the fields of Tribal Health, One Health, Climate Change, and Health Technology Assessment (HTA) through systematic and scoping reviews, creating evidence and gap maps, and implementing evidence.

PRIMARY RESEARCH STUDIES

We are constantly engaging ourselves in the primary research to serve better for the vulnerable, marginalized, neglected groups in the society.

We have worked on a study, “Perception of Human Rights in Health Care among Tribal Youth and Young Adults in Purulia, West Bengal” which got accepted for publication in the Journal of Family Medicine and Primary Care.

Other studies that we are conducting includes

- Perception of human rights in health care among the tribal youth and young adult population in Purulia, West Bengal: A cross-sectional study
- Morbidity among the tribal populations of West Bengal: A study based on data collected from the Mobile Medical Clinics
- A qualitative study on the impact of risk communication on COVID-19 through community radio in Tribal villages of Purulia district, West Bengal

- Assessment of patient satisfaction with mobile medical clinics in two districts of North Bengal, India
- Non-Communicable Disease prevalence and associated risk factors among the tribals in Purulia and Jalpaiguri districts of West Bengal
- EQ-5D-5L Value Set development for tribal population in India
- Burden and pattern of infectious diseases among tribal and non-tribal People of North Bengal, India
- Study on maternal and neonatal health among tribal people of Purulia
- Social Return on Investment Analysis of HDFC CSR in Odisha and Uttarakhand in collaboration with 4th Wheel

PUBLIC HEALTH

Under public health domain, we have few papers that was published in BMJ Open journal in 2023. These includes

- Estimation of non-health gross domestic product (NHGDP) loss due to COVID-19 deaths in West Bengal, India
- Model-based estimation of burden of COVID-19 with disability-adjusted life years and value of statistical life in West Bengal, India
- Effectiveness of an oral health curriculum in reducing dental caries increment and improving oral hygiene behaviour among schoolchildren of Ernakulam district in Kerala, India: study protocol for a cluster randomised trial

Other health economics studies that we work upon are:

- “A Cost-Effectiveness Analysis of Pre-Exposure Prophylaxis to Avert Rabies Deaths in School-Aged Children in India”,
- “Cost analysis of implementation of a population level rabies control programme for children in India,
- “Catastrophic Health Expenditure and Poverty Impact Due to Mental Illness in India,
- “Factors associated with stigma and manifestations experienced by Indian Health Care Workers involved in COVID-19 management in India: A Qualitative Study”

IMPACTS OF OUR PRIMARY RESEARCH

- Based on our study “Assessment of patient satisfaction with mobile medical clinics in two districts of North Bengal, India”, about 43.3% of the patients in Alipurduar districts and 71.2% in Jalpaiguri districts are satisfied with Mobile Medical clinics. This study has concluded that policy makers may consider MMCs to be an effective strategy to improve health care in remote, underserved areas where access to public health care facilities are limited.
- Based on the study “Morbidity among the tribal populations of West Bengal: A study based on data collected from the Mobile Medical Clinic”, in the tribal community, there is a high prevalence of infectious diseases, injuries and pain, non-communicable diseases (NCDs), gastrointestinal issues, and vertigo, all of which contribute significantly to morbidity rates. This study conclude that primary care providers like MMCs and family physicians in India can help improve access to health care particularly for rural, disadvantaged, and underserved populations.
- Based on the study “Perception of human rights in health care: A cross-sectional study among tribal young adults of Puruliya, West Bengal”, the majority of the people demonstrate a moderate level of awareness of health rights.
 - Approximately 90.28% believed that tribal individuals are devoid of constitutional rights.
 - This study results urges the Governmental and non-governmental groups the need to adopt a comprehensive approach towards the welfare of tribal communities. In addition, incorporating several facets of human rights in healthcare into the educational curriculum, with community outreach, will likely enhance the understanding of ‘Human Rights’ and hence facilitate more effective utilization of various services.



Meet Our Team



Dr. Nirmalya Mukherjee
Director



Dr Paramita Bhattacharya
Assistant Director



Dr. Sajda Khatoun
Research Officer



Dr. Biswajit Mahapatra
Research Officer



Ms. Suraya Roy
Research Officer



Mr. Soumya Chandra
Research Coordinator



Dr. Edakashwa Thubru
Research Associate



Ms. Pritha Das
Research Associate



Mr. Anirban Roy
Deputy Director - Administration



Mr. Soumen Bhuiya
Finance Officer

Meet Our Team

SENIOR FELLOWS



Mr. Pranay Lal
Chief Research Advisor



Prof. Denny John
Research Methodologist

OTHER FELLOWS



Dr. Rakesh Pillai
Senior Epidemiologist



Dr. Vivek Verma
Medical Statistician



Dr. Dhananjay Kr. Srivastava
Epidemiologist

RECOGNITION



Evidence Synthesis and
Implementation for Indigenous Health
A JBI Affiliated Group

CPHR is recognized as a JBI affiliate Centre and is the fifth affiliate Centre in the country as “Evidence Synthesis and Implementation for Indigenous Health. A JBI Affiliated Group”. It is a first Centre in India focusing on evidence implementation, the first Centre in Eastern India

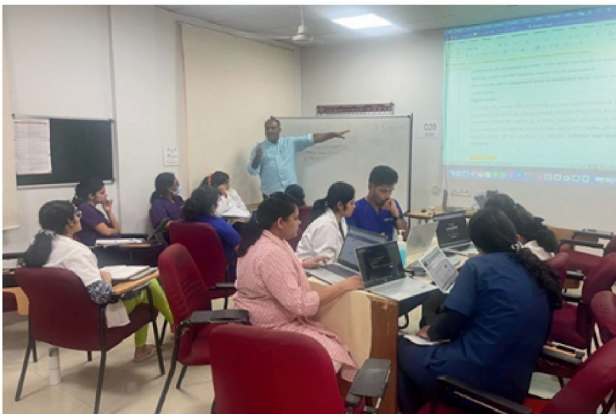
EVENTS & WORKSHOPS

LAUNCH OF DALY CALCULATOR BY CPHR-MANT

CPHR MANT launched a proprietary research tool, COVID-DALY, or “Disability Adjusted Life Years” calculator. DALY Calculator was invented by CPHR to know the impact of pandemic-influenced catastrophe that we experienced during last 2 years or so. This tool calculates the number of DALYs lost due to premature death or disability by taking into account the Years of Life Lost (YLL) due to premature death and the Years Lost Due to Disability (YLD) due to infection-related disability.



WORKSHOP ON EVIDENCE SYNTHESIS ON 18TH, AND 20TH FEBRUARY 2023 AT FACULTY OF DENTAL SCIENCES, RAMAIAH UNIVERSITY OF APPLIED SCIENCES, BENGALURU.



The JBI Affiliate Centre hosted a workshop titled “Evidence Synthesis and Evidence Implementation for Indigenous Health” at Ramaiah University of Applied Sciences in Bengaluru on March 18th and 20th. Prof. Denny John, Co-Director, JBI Affiliate Centre on Evidence Synthesis and Evidence Implementation for Indigenous Health, officiated over this workshop. This workshop focused on methods and principles for conducting systematic reviews.



INAUGURAL EVENT OF EVIDENCE SYNTHESIS AND IMPLEMENTATION FOR INDIGENOUS HEALTH: A JBI AFFILIATED CENTRE ON 11th MARCH 2023 AT HOTEL THE SOJOURN, KOLKATA, WEST BENGAL.

CPHR, MANT organized an inaugural program of JBI Affiliate Centre on Evidence Synthesis and Evidence Implementation for Indigenous Health on 11th March, 2023. The welcome address was delivered by Dr. Mukherjee and subsequently followed by Dr. Denny John, Co-Director of the JBI Affiliate Centre. The presidential address was delivered by health economist Dr. Barun Kanjilal. The session was then addressed by the Director of WHOCC for SDH and HiAP, Professor Debashis Basu.



WORKSHOP ON EVIDENCE SYNTHESIS ON 11th MARCH 2023 AT HOTEL THE SOJOURN, KOLKATA, WEST BENGAL.

The workshop was conducted by Professor Denny John and Mr. Abhirup Dutta Majumdar. Professor Denny John discussed the history of systematic reviews, evidence synthesis and the institutions affiliated with this program. Mr. Majumdar then delivered a presentation on network meta-analysis and meta-analysis. He described how a robust statistical combinatorial framework is provided by meta-analysis and network meta-analysis to represent the magnitude and direction of an effect.



11th NATIONAL WORKSHOP ON IMPLEMENTATION OF MPOWER POLICY IN INDIA, 11-14th APRIL 2023.

This workshop was organized by The International Union Against Tuberculosis and Lung Disease. The participants received instruction from Dr. Nirmalya Mukherjee on Sections 5 and 6 of the COTPA, in addition to his contributions on the significance of cautioning minors on Section 6 of COTPA and the significance of Tobacco Advertising, Promotion, and Sponsorship in the Tobacco Industry and the Varieties of TAPS.



GLOCAL EVENTS

This event was a seven-day event held across the globe from 5th-11th June, 2023, as a part the JBI gLOCAL Solution Room, JBI CPHR and JBI Ekurhuleni, jointly organized a workshop on Adolescent Health. This workshop was based on two sessions i.e., Adolescent health in India and South Africa, and Global Evidence based Adolescent health care.

ONE HEALTH IN INDIA: PRIORITIES AND CHALLENGES, JULY 18TH, 12-2 PM (WEBINAR)

On this Webinar, practitioners and researchers working on One Health in India at the State and National level come together and shared their field experiences on One Health, examined evidence generation, and one Health economics.

The speakers include Dr. Chanchal Bhattacharya, Nodal Office, Zoonotic & Infectious Disease, Animal Husbandry, Government of Delhi Animal Husbandry, Government of Delhi, Dr. Omesh Bharti (Padmashri), Principal, State Institute of Health and Family Welfare (SIHFW), Himachal Pradesh, Dr. Anil Sharma, Veterinary. Officer, Veterinary Polyclinic Rampur Bsr, Shimla, Department of Animal Husbandry, Government of Himachal Pradesh, Himachal Pradesh, and Dr. Ganesh Kondabuttala, Professor of Practice, Ramaiah University of Applied Sciences; Former Principal Scientist, Indian Council of Agriculture Research (ICAR).

MENTAL HEALTH AT CROSSROADS: CHALLENGES AND SOLUTIONS FROM INDIA AND SOUTH AFRICA, SEPTEMBER 8TH, 13:30-17:30 (WEBINAR)

The event was organized by the two affiliate groups of JBI from India and South Africa. The event aimed at bringing academics, researchers and practitioners working on tribal health in India and share experiences on mental health in India and South Africa.



TRAININGS

Through our Evidence Synthesis and Implementation: A JBI Affiliated Centre we provide trainings on evidence synthesis. These training includes

01

JBI PROTOCOL TRAINING

Mentor: Dr. Denny John

Target Audience: M.Sc. (Health Economics) Students

Venue: Manipal Academy of Higher Education, Manipal

Date: May 8-12, 2023

02

TOBACCO ECONOMICS

Mentor: Dr. Nirmalya Mukherjee

Target Audience: M.Sc. (Health Economics) Students

Venue: Manipal Academy of Higher Education, Manipal

Date: May 9, 2023

03

HEALTH ECONOMICS

Mentor: Dr. Denny John

Target Audience: MBA (Hospital Management) and MPH students

Venue: Chitkara University, Chandigarh

Date: May 15-20, 2023

04

SCOPING REVIEWS

Mentor: Dr. Denny John

Target Audience: Mid-career and Senior professionals

Venue: Online (August-September), 2 weekend sessions



05

SYSTEMATIC REVIEWS OF ECONOMIC EVIDENCE

Mentor: Dr. Denny John

Target Audience: Mid-career and Senior professionals

Venue: Online (September), 2 weekend sessions

06

SCIENTIFIC WRITING FOR UNANI TEACHERS

Mentor: Dr. Denny John

Target Audience: Faculty, Masters and PhD students

Venue: National University of Unani Medicine, Bengaluru

Date: September 20, 2023

07

BASIC COURSE ON TOBACCO CONTROL AND ADVANCE COURSE ON TOBACCO CONTROL

Online Course- Dr Nirmalya Mukherjee, managed by Resource Centre for Tobacco Control (RCTC), PGIMER Chandigarh: By Dr Nirmalya Mukherjee

08

REGULAR SESSIONS AT ADMINISTRATIVE TRAINING INSTITUTE

State Institute of Panchayats and Rural Development and West Bengal Judicial Academy on Tobacco Control by Dr. Nirmalya Mukherjee

INTERNSHIP



CPHR hosted two internees from January, 2023 to May 2023, Ms. Archa Raj (MPH) and Dr. Edakashwa Thubru (MPH) from Ramaiah University of Applied Sciences. CPHR also supervised another two MPH interns from 14th August, 2023 to 25th September 2023, Dr. Sneha Singh and Sritama Dutta from ICMR Regional Research Centre.

CONFERENCE PROCEEDINGS & PAPER PRESENTATION

- Oral health curriculum to reduce dental caries increment in school children Authors: Das, H., Janakiram, C., Ramanarayanan, V., Karuveettil, V., Kumar, V., Balachandra, P., Varma, B., & John, D. September 2023
- CO217 Treatment Options for Management of Facial Angiofibroma Associated with Tuberous Sclerosis Complex: A Systematic Review of Evidence of Clinical Effectiveness and Cost-Effectiveness Authors: D. John, L.A. Schachner, J.Teng, M.S. Aman, S. Paul Choudhury, S. Baggarapu, E. Beresford June 2023
- EE232 Impact of Updated Mortality Estimates on the Cost-Effectiveness of Rifaximin for the Treatment of Patients with Overt Hepatic Encephalopathy Authors: S. Bhattacharyya, D. John, A. Thomas, P. Soni, A.B. Jesudian, A.A. Dashputre, G. Joseph June 2023
- EE525 Topical Sirolimus 0.2% Gel for Facial Angiofibroma Associated with Tuberous Sclerosis Complex in the United States: A Cost-Effectiveness Analysis Authors: S. Dutta, J. Teng, S. Bhattacharyya, D. John, S. Bogarappu, E. Beresford June 2023
- HTA64 Burden of Illness in Patients with Facial Angiofibroma Associated with Tuberous Sclerosis Complex: A Systematic Review Authors: D. John, L.A. Schachner, A.A. Hebert, D.Rai, A.Dutta Majumdar, S. Bogarappu, E. Beresford June 2023
- Tobacco Taxation and Prices in India (co-authored with Nirmalya Mukherjee, Pranay Lal and Amit Yadav) in 11th National Workshop on Implementation of MPOWER Policy in India held April 2023 in Kolkata, West Bengal.
- Assessing Tobacco Waste as a Form of Post-Consumption Marketing through an Observational Study in Kolkata, India (co-authored GrazieleGrilo, Alena Madar, Nirmalya Mukherjee and Ryan D Kennedy) at the 2023 SRNT (Society for Research on Nicotine and Tobacco Annual Meeting).
- Assessing And Classifying Tobacco Waste In Urban Outdoor Environments In Kolkata, India” (co-authored Ryan D Kennedy, Alena Madar, GrazieleGrilo, Nirmalya Mukherjee, Kevin Welding and Joanna E Cohen) at the 2023 SRNT (Society for Research on Nicotine and Tobacco Annual Meeting).
- Do Non-smokers live longer?: A Comparison of Life Expectancy of Male Smokers and Non-Smokers in India (co-authored with Nirmalya Mukherjee and Pranay Lal) in The Union World Conference on Lung Health 2022: Combatting Pandemics Today and Tomorrow, November 2022.



CONFERENCE PROCEEDINGS & PAPER PRESENTATION

- **How was the Tobacco Consumption in West Bengal, India: A District Level Comparative Analysis by Using DHS Data (co-authored with Nirmalya Mukherjee and Pranay Lal) in The Union World Conference on Lung Health 2022: Combatting Pandemics Today and Tomorrow, November 2022.**
- **How Household Nutrition has been impacted by tobacco consumption in India: A State-level analysis (co-authored with Sajda Khatoon, Nirmalya Mukherjee and Pranay Lal) in The Union World Conference on Lung Health 2022: Combatting Pandemics Today and Tomorrow, November 2022.**
- **Advancing bidi control - regulation, enforcement and impact on the environment, climate change and livelihoods and Vendor Licencing: Experiences from the states: Presented at 3rd National Consultation on 'Emerging Challenges & Opportunities in Tobacco Control', held from 22nd to 23rd February 2023, at New Delhi organized by ICMR- National Institute of Cancer Prevention & Research (NICPR) and The Union, South-East Asia Office. Presented by Dr Nirmalya Mukherjee**
- **Advancing Bidi Control and Implementation of Section 6 of COTPA 2023 in "11th National Workshop on Implementation of MPOWER Policy in India" from 11 to 14 April 2023, Kolkata, West Bengal. Presented by Dr Nirmalya Mukherjee**
- **Chaired a Panel discussion on Strategies to counter persisting challenges in implementing COTPA, NTCP and newer legislations at National consultation on the best practices and challenges in implementation of tobacco control policies held on 6th and 7th July 2023 at Bengaluru, organised by IPH. Presented by Dr Nirmalya Mukherjee**
- **State level Law Enforcers Training held on 21st August, 2023 organised by State Tobacco Control Cell, Government of West Bengal. Presented by Dr Nirmalya Mukherjee**
- **Role of Civil Society in Tobacco Control at National workshop on Collaborative Strategies for Tobacco Control: Fostering Multi-Stakeholder Engagement in India' held from 25 to 28 October in Kolkata. Presented by Dr Nirmalya Mukherjee**
- **How community Media Can Promote maternal and neonatal health, Including Vaccination: a Case Study from India presented at IMPRINT Network Meeting, 6th and 7th of February 2023 held in London organised by London School of Hygiene and Tropical Medicines. Presented by Dr Nirmalya Mukherjee, co-authored by Dr Paramita Bhattacharya and Dr Biswajit Mahapatra**



GOVERNING COUNCIL

During 2022-23, CPHR could form the Council with the following Members:



Prof. Vinod Pavarala
UNESCO Chair on
Community Media



Prof. Dipak Ranjan Mondal
Former Vice Chancellor of
Sidho Kanho Birsha University



Dr. Sanjay Kapur
Managing Director
JSI, India



Dr. Mira B Aghi
Behavioral Scientist



Mr. Dilip Ghosh , IAS (Retd.)
Public Health Expert



Dr. Raj Shankar
Public Health Expert



Prof. Barun Kanjilal
Independent Consultant



Mrs. Srimanti Hembram
Community Mobilizer & Radio Jockey



ADVISORY BOARD

During 2022-23, CPHR could form the Board with the following Members:



Dr. Dipankar Ghose
Senior Director - WWF-India



Els Reynaers Kiny
Head Environment Department
M.V Kiny



Dr. Pankaj Bhardwaj
Additional Professor
AIIMS Jodhpur



Dr. Madhur Verma
MD Assistant Professor
AIIMS Bhatinda



Dr. Jaideep Menon
AIIMS Kerala & MD
AIMSRC



Dr. Keerti Bhusan
Senior Advisor



Dr. Chitra Venkateswaran
Founder and Director
Mehac Foundation



Dr. Krishnamurthy Jayanna
Professor & Dean, FLAHS,
Ramaiah University of
Applied Sciences



Ms. Sarala Soren
Tribal Community
Representative

PARTNERSHIPS & COLLABORATIONS

- CPHR has partnered with Government bodies.
- The International Union against Tuberculosis and Lung Disease serves as a significant funding entity
- CPHR collaborated with Bwell Health Technologies, which is an AI-based Digital Health start up that focuses on cardiovascular health monitoring biomarkers. Collaboratively, they are striving to complete an implementation trial of a therapeutic and cardiovascular disease screening platform in the underserved and tribal communities of West Bengal. The objective of this initiative is to generate empirical support for the utilization of digital health instruments in underserved communities.

ACADEMIC COLLABORATIONS

- CPHR has collaborated with 4 academic institutions during this period; Manipal Academy of Higher Education, Manipal; Chitkara University, Chandigarh; KLE Academy of Higher Education & Research Belagavi; Department of Statistics, Assam University
- CPHR has signed collaboration with School of Public Health, DY Patil (Deemed to be University), Navi Mumbai.
- CPHR has collaborated with Lorestan University of Medical Sciences, Khorramabad, Iran.



INSTITUTIONAL COLLABORATIONS

- CPHR has several institutional collaborations like Bwell(for digital health), 4th Wheel Social Impact (for monitoring and evaluation and social return on investment) and The Constellation (for co-production of research).
- CPHR has collaborated with two institutions viz. One Health Trust and Mehac Foundation



MEMBERSHIPS



- CPHR is now member of organisations such as Health Technology Assessment International (HTAi), Indian Health Economics and Policy Association (IHEPA), Indian Society of Medical Statistics (ISMS), International Society of Pharmacoeconomics and Outcomes Research (ISPOR), Indian Public Health Association (IPHA), The Partnership for Maternal, Newborn and Child Health (PMNCH), Royal Society for Tropical Medicine and Hygiene (RSTMH), Society for Research on Nicotine and Tobacco (SRNT) and Epidemiology Foundation of India.
- Member of Social Value International through memberships

PAPER PUBLICATIONS

1. **Mahapatra B, Bhattacharya P, Karuveetil V, John D, Khatoon S, Mukherjee N, et al. Cost effectiveness of decentralized care model for managing multi-drug-resistant tuberculosis in low- and middle-income countries: a systematic review protocol. JBI Evidence Synthesis. 2023 Sep 28; <https://journals.lww.com/10.11124/JBIES-23-00023>**
2. Khatoon S, Bhattacharya P, Mukherjee N, Menon J, Janakiram C, Rajendran A, et al. Prevalence and risk factors of non-communicable diseases in indigenous populations of South Asia: a systematic review protocol. In Review; 2023 Sep. <https://www.researchsquare.com/article/rs-3329706/v1>
3. **Mahapatra B, Bhattacharya P, Karuveetil V, John D, Khatoon S, Mukherjee N, Jankiram C. Economic Evaluation of decentralized care model for managing MDR-TB: A systematic review protocol in low- and middle-income countries. JBI Evidence Synthesis. 2023. (accepted)**
4. Khatoon, S., Johnson, A., Bhattacharya, P., Mukherjee, N., John, D., & Jeyanna, K. Perception of human rights in health care among the tribal youth and young adult population in Purulia, West Bengal: A cross-sectional study. *Journal of Family Medicine and Primary Care*. 2023. (accepted)
5. **Mahapatra, B., Mukherjee, N., Khatoon, S., Bhattacharya, P., & John, D. Morbidity among the tribal populations of West Bengal: A study based on data collected from the Mobile Medical Clinics. Journal of Family Medicine and Primary Care. 2023. (accepted)**
6. Chilakam N, L V, K S, Rajendran A, Thunga G, Poojari PG, Rashid M, Mukherjee N, Bhattacharya P, John D. Economic burden of mosquito borne diseases in low- and middle-income countries: A systematic review protocol. *JMIR Preprints*. 24/07/2023:50985. <https://preprints.jmir.org/preprint/50985>
7. **Khatoon, S., Bhattacharya, P., Mukherjee, N., Menon, J., Janakiram, C., Rajendran, A., Das, P., & John, D. Association of climate change and vector borne diseases in South Asia: a systematic review protocol, 17 August 2023, PREPRINT (Version 1) available at Research Square [<https://doi.org/10.21203/rs.3.rs-3257293/v1>]**
8. Grover, A., Venkatesh, U., Kishore, J., Chakma, T., Thomas, B., Menon, G., Periyaswamy M., Kulkarni, R., Prusty, R.K., Venkateswaran, C., Mishra, B., Balu, V., Viray, M., Mathew G., Ketharam, A., Balachander, R., Singh, P., Jakhar, K., Devi, R., Saha, K., Barde, P., Moral, R., Singh, R., John, D., Yadav, J., Kohli, S., Aggarwal, S., Rao, V., & Panda, S. (2023). Factors associated with stigma and manifestations experienced by Indian Health Care Workers involved in COVID-19 management in India: A Qualitative Study. *Cambridge Prisms: Global Mental Health*, 1-24
9. **Krishnan, N., Sunder P., Nithin L, Mohan, M., Venkateswaran, C., John, D. 2023. "Participatory Research in Mental Health Care Services in Low-and Middle-income Countries: A Scoping Review Protocol." OSF Preprints. August 3. doi:10.31219/osf.io/8cw6**



PAPER PUBLICATIONS

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EMERGING FOCUS AREA

Since its inception, the CPHR has endeavored to facilitate a comprehensive comprehension of health for all through its extensive research domains. We have recently begun working in the areas of Health Technology Assessment (HTA), One Health, and Climate Change in an effort to expand and refine our research scope. We were compelled to investigate these research domains in order to formulate more informed policy and clinical judgments concerning HTA, One Health, and climate change.

HEALTH TECHNOLOGY ASSESSMENT RESEARCH UNIT

was formed to respond to the policy needs of a particular health system. HTA is a field of scientific inquiry concerned with the introduction and diffusion of health technologies in order to inform policy and clinical decision making. Health technology assessment (HTA) is an interdisciplinary domain that examines the effects of technology on health, taking into account the unique healthcare environment and viable alternatives. The implications of HTA on context encompass economic, organizational, social, and ethical dimensions. A paper authored by the CPHR regarding HTA was recognized and awarded the Best Paper Award by the Developing Country Interest Group of Health Technology Assessment International (HTAi). At this time, we engage in a primary investigation concerning the Patient and Citizen Involvement Group

<https://www.who.int/news-room/questions-and-answers/item/one-health>

ONE HEALTH RESEARCH UNIT

“One Health” refers to a unified, integrated strategy for optimizing and balancing the health of the environment, animals, and humans. Preventing, predicting, detecting, and responding to global health hazards such as the COVID-19 pandemic are of the utmost importance. We operate on a trans-disciplinary, multi-sectoral, and collaborative scale across local, regional, national, and international arenas. In addition, we are establishing solid alliances in order to control and prevent zoonotic and emergent infectious diseases, as well as other One Health concerns, in a targeted and strategic manner.

PEOPLE SCIENCE CENTRE

MANT established the “People Science Centre” in 2023 with the intention of educating communities about science and development indicators. MANT proposes restoring ecosystem functions and resilient marginalized and vulnerable groups against market and climate disruptions in order to reverse environmental degradation. PSC is focusing on climate smart agriculture, community seed banking, water body restoration and fish farming, climate-smart nutrition sensitive aquaculture, rewilding, agroforestry, bee keeping, local pottery, bio lab, NTEP: Technology implementation and value addition, local weather station and crop advisor, sky observatory and indigenous small farm birds.



ACCOLADES & ACHIEVEMENTS

- CPHR team authored paper 'Health Technology Assessment for digital health technologies in India: A framework for action' wins Best Paper Award conferred by Developing Country Interest Group, Health Technology Assessment International (HTAi)
- Dr. Biswajit Mahapatra received the "Best Researcher Award" for his contribution and honourable achievement in innovative research at the 10th Edition of the International Young Scientist Awards, Science Father. Registration No.: 10337
- One of the winners of the Grassroots Science Advice Promotion Awards 2023 - by INGSA-Asia

ARTICLES IN PRESS

- On December 1, 2023, CPHR was showcased in a news article by South First. The report highlighted the development of a novel Calculator designed to quantify the economic consequences of Covid-19. This calculator was used to analyze the economic loss of four Southern states in India, namely Karnataka, Kerala, Andhra Pradesh, and Telangana.
- CPHR was featured on India Speed on June 2023, which highlighted the data related to Mental Health Expenses based on the study "Catastrophic Health Expenditure and Poverty Impact Due to Mental Illness in India" published in the Journal of Health Management.

We are unable to determine the drivers of cost [of mental illness] with the NSS data, since data is aggregated", says Denny J

DEVELOPMENT & INNOVATION

COVID-DALY CALCULATOR

Age Group	No. of Cases	No. of Death Cases	Disabling Duration	Life Expectancy
Age From: <input type="text"/>	Male: <input type="text"/>	Male: <input type="text"/>	Days: <input type="text"/>	<input type="text"/>
Age To: <input type="text"/>	Female: <input type="text"/>	Female: <input type="text"/>		
All experienced by people in home isolation % <input type="text"/>		Hospitalized cases % <input type="text"/>		+ ADD

Discount Rate:

Disability Weights:

- All
- Cough
- Fever/ Chills
- Shortness of breath
- Myalgia
- Diarrhea
- Nausea/Vomiting
- Sore throat
- Headache
- Chest pain
- Abdominal pain
- Altered mental status/Confusion

Method:

- Additive
- Multiplicative
- Maximum Limit

Get Result Reset

DALY Calculator was launched by CPHR to know the impact of pandemic-influenced catastrophe that we experienced during last 2 years or so. This tool calculates the number of DALYs lost due to premature death or disability by taking into account the Years of Life Lost (YLL) due to premature death and the Years Lost Due to Disability (YLD) due to infection-related disability.

The Calculator was validated based on two studies

- John D, Narassima MS, Bhattacharya P, Mukherjee N, Banerjee A, Menon J. Model-based estimation of burden of COVID-19 with disability-adjusted life years and value of statistical life in West Bengal, India. *BMJ Open*. 2023 Jan 23;13(1):e065729 <https://doi.org/10.1136/bmjopen-2022-065729>
- John D, Narassima MS, Bhattacharya P, Mukherjee N, Banerjee A, Menon J. Model-based estimation of burden of COVID-19 with disability-adjusted life years and value of statistical life in West Bengal, India. *BMJ Open*. 2023 Jan 23;13(1):e065729 <https://doi.org/10.1136/bmjopen-2022-065729>

YEARS OF POTENTIAL PRODUCTIVE LIFE LOST CALCULATOR

Years of Potential Productive Life Lost (YPPLL) Calculator

Retirement Age (Years)

Financial Discount Rate (%)

Age Group	Age From	Age Up to	No of Death Cases
	<input type="text"/>	<input type="text"/>	<input type="text"/>

+ ADD

Get Result Reset

YPPLL Calculator estimates the number of productive years that a person would have lived in the absence of an event.

COST OF PRODUCTIVITY LOSS CALCULATOR

Cost of Productivity Lost - Premature Mortality Calculator

Retirement Age (Years)

Financial Discount Rate (%)

Per Capita GDP

Age Group	Age From	Age Up to	No of Death Cases	Proportion of the Working Population
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

+ ADD

Get Result Reset

Cost of Productivity Lost - Absenteeism

Number of Non-Working Days in a Week

Per Capita GDP

Age Group	Age From	Age Up to	Number of Cases	Disability Duration (Days)	Proportion of the Working Population
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

+ ADD

Get Result Reset

YEARS OF POTENTIAL LIFE LOST (YPLL) CALCULATOR

The YPLL Calculator interface includes two input fields for 'Total Population' and 'Total Population Effected by Disease'. Below these is a table with columns for 'Age Group', 'Age group Population', 'Age group Population Effected', 'No of Death Cases', and 'Life Expectancy'. The 'Age Group' column contains sub-inputs for 'Age From' and 'Age Upto'. A '+ADD' button is located at the end of the table row. At the bottom of the form are 'Get Result' and 'Reset' buttons.

Age Group	Age group Population	Age group Population Effected	No of Death Cases	Life Expectancy	
Age From: <input type="text"/> Age Upto: <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	+ADD

YPLL calculator estimates the average time a person would have lived had he or she not died prematurely. It is the duration of life in the absence of the event. A measure of premature mortality

PREMATURE YEARS OF POTENTIAL LIFE LOST (PYPLL) CALCULATOR

The PYPLL Calculator interface features a dropdown menu for 'Life Expectancy' and input fields for 'Total Population' and 'Total Population Effected By Disease'. It also includes a table with columns for 'Age Group', 'Age group Population', 'Age group Population Effected', and 'No of Death Cases'. The 'Age Group' column has sub-inputs for 'Age From' and 'Age Upto'. A '+ADD' button is at the end of the table row. 'Get Result' and 'Reset' buttons are at the bottom.

Age Group	Age group Population	Age group Population Effected	No of Death Cases	
Age From: <input type="text"/> Age Upto: <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	+ADD

PYPLL calculator is a tool used to quantify the impact of premature mortality on a population. It is a metric often utilized in public health research and policy analysis.

WORKING YEARS OF POTENTIAL LIFE LOST (WYPLL) CALCULATOR

The WYPLL Calculator interface includes the following fields and table:

Retirement Age:

Lower Limit of Working Age:

Total Population:

Total Population Effected By Disease:

Age Group	Age group Population	Age group Population Effected	No of Death Cases	
Age From: <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	+ ADD
Age Upto: <input type="text"/>				

Buttons: Get Result, Reset

WYPLL calculator calculates the years lost in the working age group.

VALUE OF STATISTICAL LIFE (VSL) CALCULATOR

The VSL Calculator interface includes the following fields and table:

VSL of population: INR Million

Age Group	No of Death Cases	Life Expectancy	
Age From: <input type="text"/>	<input type="text"/>	<input type="text"/>	+ ADD
Age Upto: <input type="text"/>			

Buttons: Get Result, Reset

VSL is the rate of substituting the possibility of survival and income, that is, a trade-off between survival and money. Governments employ this crucial indicator of health risk at work, which is based on job characteristics and personal attributes, for cost-benefit analysis and risk monetization.



CPHR also developed the above calculators which were validated based on the following publication:

- John D, Narassima MS, Bhattacharya P, Mukherjee N, Banerjee A, Menon J. Model-based estimation of burden of COVID-19 with disability-adjusted life years and value of statistical life in West Bengal, India. *BMJ Open*. 2023 Jan 23;13(1):e065729
<https://doi.org/10.1136/bmjopen-2022-065729>
- John D, Narassima MS, Menon J, Rajesh JG, Banerjee A. Estimation of the economic burden of COVID-19 using disability-adjusted life years (DALYs) and productivity losses in Kerala, India: a model-based analysis. *BMJ Open*. 2021 Aug 18;11(8):e049619.
<https://doi.org/10.1136/bmjopen-2021-049619>

COVID NON HEALTH GDP CALCULATOR

NHGDP Calculator

GDP Per Capita

Per Capita Health Expenditure

Discount Rate

Lower Limit of Working Age


Excess Deaths (Optional)

Age Group	No of Death Cases	Life Expectancy	
Age From <input type="text"/>	Male <input type="text"/>	Male <input type="text"/>	+ ADD
Age Upto <input type="text"/>	Female <input type="text"/>	Female <input type="text"/>	

Non-Health GDP Loss calculator: The socio-economic factors have had an important bearing in determining outcomes (including mortality) during the COVID-19 pandemic. It is therefore important to analyze the economic impact of non-health components of Gross Domestic Product (GDP). This is because the point of interest is the indirect impact of mortality on non-health consumption expenditures since the use of health services or goods does not generate utility or welfare by itself. GDP includes medical and health expenditures; therefore it would be more appropriate to assess the impact on the non-health components of GDP. This is aligned with the World Health Organisation (WHO) guidelines for quantifying the economic impact of a disease or an injury. Economic losses in terms of Non-Health Gross Domestic Product (NHGDP) across various age brackets can be estimated to facilitate comparisons and to initiate advocacy for an increase in health investments against COVID-19.

This calculator was validated in the following publication:

Bhattacharya, P., John, D., Mukherjee, N., Narassima, M.S., Menon, J., & Banerjee, Amitava. Estimation of Non-Health Gross Domestic Product (NHGDP) Loss due to COVID-19 Deaths in West Bengal, India. *BMJ Open*. 2023;13:e072559. <http://doi.org/10.1136/bmjopen-2023-072559>



IMPACTS OF THE COVID DALY & NON HEALTH GDP CALCULATOR

- Based on the study “Model-based estimation of burden of COVID-19 with disability-adjusted life years and value of statistical life in West Bengal, India” and “Estimation of the economic burden of COVID-19 using disability-adjusted life years (DALYs) and productivity losses in Kerala, India: a model-based analysis” DALY calculator can estimate the economic impact of any nation or state due to Covid-19 pandemic by providing a comprehensive assessment of disability-adjusted life years (DALYs) and related metrics (Years of Potential Productive Life Lost (YPPLL) calculator, Cost of Productivity Lost (CPL) calculator, Years of Potential Life lost (YPLL) calculator, Premature Years of Potential Life Lost (PYPLL) calculator, Working Years of Potential Life Lost (WYPLL) calculator, Value of Statistical Life (VSL) calculator)
- “Estimation of Non-Health Gross Domestic Product (NHGDP) Loss due to COVID-19 Deaths in West Bengal, India”. Based on this study, the NHGDP Calculator determined that COVID-19 has significantly led to a substantial decline in the economy. By focusing on the non-health components of Gross Domestic Product (GDP), this calculator provides a nuanced understanding of the economic impact beyond direct healthcare expenditures. The estimation of Non-Health Gross Domestic Product (NHGDP) loss takes into account the indirect consequences of mortality on non-health consumption expenditures. This tool serves as an essential tool for policymakers and stakeholders, providing vital information on the complex economic challenges caused by COVID-19 and guiding strategies for recovery and future planning to enhance resilience.

KEY HIGHLIGHTS OF THE YEAR

**November
2022**

MANT officially launched the Centre for Public Health Research (CPHR) after running from 2017

**November
2022**

CPHR has launched a proprietary calculator to calculate "Disability Adjusted Life Years"

**March
2023**

CPHR became a JBI Affiliate Centre and the centre was inaugurated on the 11th March 2023 as "JBI Affiliated Centre on Evidence Synthesis and Evidence Implementation for Indigenous Health"

**May-
September
2022**

Hosted a webinar on Global Evidence, Local Decisions, One Health in India, and Mental Health at Crossroads: Challenges and Solutions from India and South Africa

**October
2023**

CPHR won best paper Award for a paper "Health Technology Assessment for digital health technologies in India: A framework for Action"

**November
2023**

CPHR Foundation Day

**December
2023**

National Symposium on Tribal Health

REACH US

Dr. Nirmalya Mukherjee

Director

The Chambers, Ground Floor,
Space No. 006 & 007, 1865
Rajdanga Main Road, Kolkata
-700107, West Bengal

+91-8420011313

admin@cphr-mant.org //
mant.kolkata@gmail.com

www.cphr-mant.org //
www.mant.org.in

