# Dr. Rukman Manapurath M.D

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**Summary**: Highly motivated physician-scientist with expertise in child and maternal nutrition, nutritional epidemiology, and public health. My research focuses on early childhood nutrition and its long-term impact on chronic diseases. I possess a strong track record of leading and collaborating on research projects, conducting systematic reviews and meta-analyses, and contributing to the development of evidence-based policies. I leverage Stata for complex data analysis, secured research funding through grant proposals, and designed and implemented clinical trials.

**Current Designation**: - Research Scientist, Society for Applied Studies, Delhi, India. A WHO Collaborating research center for community-based research related to child health and nutrition, childhood vaccines, development of interventions, their evaluation, and development of strategies for delivery of the programs.

Keywords: Field of interest- Child & Maternal nutrition, Nutritional epidemiology, Vitamin and minerals, Obesity, and Cardiovascular risk assessment, Body composition, Systematic Review and Meta-analysis, WHO Anthropometry Assessment Standardized.

## **EDUCATION**

Year	Course	Institution
2007-2013	Bachelor of Medicine and Surgery (M.B.B.S)	Calicut Government Medical College, Kerala, India
2016-2019	Doctor of Medicine (M.D) in Community Medicine (Epidemiology & Public Health)	SETH G S Medical College & King Edward Memorial Hospital, Mumbai, India
2022- ongoing	Doctor of Philosophy (Ph.D.)	Centre for International Health, University of Bergen, Norway

# **PUBLICATIONS**

List of published work in my bibliography

https://www.ncbi.nlm.nih.gov/myncbi/12afovUAwux5a/bibliography/public/

1. **Manapurath R**, Chowdhury R, Taneja S, Strand T, Bhandari N. Manapurath, Rukman et al. "Daily folic acid and/ or vitamin B12 supplementation between 6 to 30 months of age and cardiometabolic risk markers after 6 to 7 years, a follow-up of a randomized controlled trial." *The Journal of nutrition*, 2023.

- 2. Chowdhury R, **Manapurath R**, Sandøy IF, et al. 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: study protocol of an individually randomized controlled trial in India (Small Babies Trial). Trials. 2024 Feb 8.
- 3. **Manapurath R**, Gadapani B, Pereira-da-Silva L. Body Composition of Infants Born with Intrauterine Growth Restriction: A Systematic Review and Meta-Analysis. *Nutrients*. 2022;14(5):1085
- 4. **Manapurath R**, Barsha Gadapani Pathak, ...Ranadip Chowdhury et.al. Enteral Iron Supplementation in Preterm or Low Birth Weight Infants: A Systematic Review and Meta Analysis *Pediatrics*.2022
- 5. **Manapurath R**, Mohan Kumar, Barsha Gadapani Pathak, ...Ravi Prakash Upadhyay et.al. Enteral low dose vitamin A Supplementation in Preterm or Low Birth Weight Infants: A Systematic Review and Meta Analysis. *Pediatrics*.2022
- 6. **Manapurath R**, Raran Veetil D, Kamath MS. Use of modern technologies for promoting health at the population level in India. Lancet Reg Health Southeast Asia. 2023.
- 7. **Manapurath R**, Hadaye R, Gadapani B. Normal weight obesity: Role of apob and insulin sensitivity in predicting future cardiovascular risk. International Journal of Preventive Medicine. 2022;13(1):31-.
- 8. Hadaye R, **Manapurath R\***, Gadapani B. Obesity prevalence and determinants among young adults, with special focus on normal-weight obesity; a cross-sectional study in Mumbai. Indian Journal of Community Medicine. 2020;45(3):358-62.
- 9. Hadaye R, Kale V, **Manapurath RM**\*. Strategic implications of changing rule of halves in hypertension: A cross-sectional observational study. Journal of family medicine and primary care. 2019;8(3):1049.
- 10. **Manapurath RM**, Hadaye R, Varughese CS, Gadapani B. Burden of skin diseases: A camp-based cross-sectional study in a tribal area of Maharashtra. *Turk J Dermatol* 2022;16:12
- 11. Hadaye RS, **Manapurath RM\***, Gadapani BP. Awareness and acceptance of H1N1 vaccination among physicians: Experience of 2017 vaccination campaign. *Journal of education and health promotion*. 2019:8.
- 12. Choudhary T; **Manapurath R**; Prevalence of Wasting and its Associated Factors among Children Under 5 Years of Age in India: Findings from the Comprehensive National Nutrition Survey. *Indian Journal of Public Health*, Jan–Mar 2024.
- 13. **Manapurath RM** et. al. Diet and lifestyle risk factors associated with young adult hypertensives in India Analysis of National Family Health Survey IV. *J Family Med Prim Care*. 2022.

# **CONTRIBUTION TO POLICY DOCUMENTS**

- 1. WHO Guideline Pneumonia and Diarrhea 2024 (Document under review).
- 2. WHO Optimal feeding guidelines for preterm and low birth weight infants (Document Link).
- UNICEF In depth analysis of wasting and severe wasting among under five children of India, (<u>Document Link</u>)

## **RESEARCH PROJECTS**

Study Investigator: - Effect of integrated package of health and nutrition on preterm and SGA infants
 - a randomized controlled trial funded by CISMAC Norway (sample size 2600), Duration 4 years.

- Effect of vitamin supplementation on preterm or low birth weight infants update to existing optimal feeding guidelines- WHO Guideline Development Group
- Senior project coordinator in the Technical review of "Effectiveness of community-based treatment programs to treat children aged 6-59 months with uncomplicated severe acute malnutrition using alternative energy dense foods: a multicentric prospective longitudinal follow up study" (funded by Children's Investment Fund Foundation-CIFF & UNICEF, India)

## ORGANIZATIONAL EXPERIENCE

Jan 2014 - Feb 2016 | Kristu Jayanti Hospital, Rural Training Centre, affiliated to St. Johns Medical College, Bangalore | Resident Medical Doctor

August 2020- Present | Research Scientist in Centre for Health research and Development, New Delhi, India

#### **RESEARCH GRANTS**

- 1. Co-PI: Building evidence and designing solutions to prevent stillbirths in India-A collaborative approach to retrospectively analyze pregnancy cohorts in India, Agency: Indian Council of Medical Research, Budget: 10,200 USD, (National Health Priority Project); 2024
- 2. Co Investigator; WHO Recommendations for Management of Childhood Pneumonia, Guideline Development Group Systematic Reviews: Agency: WHO; Year 2023; Budget 36,000 USD
- 3. Co Investigator; Long-term impact of an integrated intervention package delivered during preconception, pregnancy and early childhood on body fat and metabolic health in children aged 5-6 years CTRI/2024/03/063819. 2022; Agency: Indian Council of Medical research
- 4. Co Investigator; 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; commissioned by the Indian Council of Medical Research.
- 5. Principal Investigator; Research Grand Society KEM Hospital Mumbai for apo-B project, year 2018
- 6. Principal Investigator; Diamond Jubilee Society Trust (DJST) KEM Mumbai for Obesity project, year 2019
- 7. Principal Investigator; Diamond Jubilee Society Trust (DJST) KEM Mumbai for Revised National Tuberculosis project, year 2020

## **ACADEMIC ACCOLADES**

Early Career Global Nutrition Award – American Society for Nutrition, Boston 2022

Young Investigator 2.0 in Platform for Research Excellence Related to National Aims (PRERNA) – an initiative by Gates Foundation to train physicians in a career in biomedical or health research (2020 – 2025).

Selected as a Mentee in Prestigious ASN Early Career Mentoring Program 2022 (Cohort 2.0); Mentor: Dr. Jennifer Savage Williams (Associate Professor in Department of Nutritional Sciences,

Director | Center for Childhood Obesity Research, The Pennsylvania State University, USA)

# **CONFERENCE PRESENTATION**

**WHO Guideline Development Pneumonia Meeting** – Presented - Effectiveness of enhanced care compared to usual care in improving clinical outcomes of Childhood Pneumonia at all levels of care, WHO Headquarters, Geneva, November 2023.

American Society for Nutrition 2022 - Effect of folate and/or vitamin B12 supplementation between 6 to 30 months of age on markers of cardiovascular illness at school age: a secondary analysis, Boston 2022(Online).

WHO Guideline Development Preterm or Low Birth Weight Micronutrient Review Meeting – Presented - Effectiveness of enhanced care compared to usual care in improving clinical outcomes of Childhood Pneumonia at all levels of care, (Online) November 2021 (<u>Document Link</u>)

**Indian Public Health Association Conference 2018 Lucknow**- Awareness & Acceptance of H1N1 Vaccination among Physicians in a Tertiary Care Institute at Indian Public Health Association Conference Lucknow

American Association of Physicians of India- Global Health Care Summit 2018- presented poster on topic "Role of apoB and fasting insulin in predicting future cardiovascular risk.

## **MD THESIS**

A Study to Estimate the Prevalence of Obesity and its Determinants with Special Reference to **Normal Weight Obesity** in a Tertiary Care Centre of a Metropolitan City (Published)

## **SKILL TRAINING**

- Individual Participant Data Meta-analysis (Indian Council of Medical Research Project, Delhi)
- ❖ Advanced Data Analysis using Stata 16 and Epidemiology (University of Bergen, Norway); March 2024
- Body Composition Analysis using Deuterium Oxide method and Dual Energy X-Ray Absorptiometry

   St. Johns Research Institute, Bangalore (International Atomic Energy Agency in India); September

  2023
- ❖ Developing digital questionnaires using Kobotool (UNICEF Project); September 2021
- Systematic Review meta-analysis and Scoping Reviews (Cochrane Workshop- One month, CMC Vellore), Match April 2021
- ❖ Data based Monitoring (DBM) for randomized controlled trials (UNICEF Project), November 2021
- Extensive Literature Review and Referencing (QMed NGO), August 2019