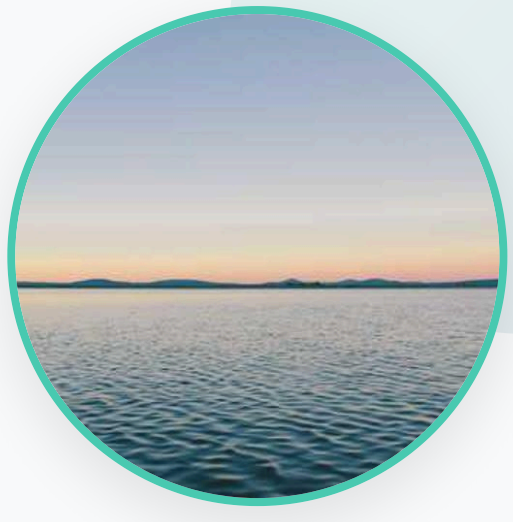
Md Ridwan Islam

Assistant Scientist, icddr,b

Public health researcher specializing in **nutrition**, **diarrheal diseases**, and **child health** at the International Centre for Diarrhoeal Disease Research, Bangladesh. Committed to improving health outcomes in vulnerable populations through evidence-based research and innovative interventions.



Google Scholar

LinkedIn

ResearchGate

Featured Projects

Severe Acute Malnutrition Research

Investigation of probiotic and synbiotic supplementation effects on growth and gut health in severely malnourished infants in Bangladesh.

Learn More →

Diarrheal Disease Management

Research on oral rehydration salt (ORS) solution utilization, maternal perceptions, and barriers to effective diarrheal disease treatment.

Learn More →

Gut Microbiota & Child Health

Studies on the relationship between gut microbiota development, human milk oligosaccharides, and childhood malnutrition in Bangladeshi infants.

Learn More →

Interested in my work or a potential collaboration? Get in Touch

Contact Me

About Me

Work Experience

Assistant Scientist
Nutrition Research Division, icddr,b

Present

Leading research on severe acute malnutrition, diarrheal diseases, and gut microbiota in children. Managing clinical trials and supervising research assistants in the implementation of nutrition interventions.

Medical Doctor
International Centre for Diarrhoeal Disease Research, Bangladesh

Previous

Provided clinical care to patients with diarrheal diseases and malnutrition. Participated in clinical research and data collection for various studies on child health.

Fellow
International Centre for Diarrhoeal Disease Research, Bangladesh

Previous

Conducted research on health insurance coverage among women of reproductive age and participated in studies on the economic impact of diarrheal diseases.

Education

Master of Public Health
Epidemiology

2019 - 2021

CGPA: 3.90/4.00. Specialized in epidemiological methods, biostatistics, and research design. Thesis focused on preventive measures for diarrheal diseases in children.

Bachelor of Medicine, Bachelor of Surgery
Holy Family Red Crescent Medical College

Previous

Comprehensive medical education with clinical rotations in various departments. Developed strong foundation in clinical practice and patient care.

Research Interests

Malnutrition · Diarrheal Diseases · Oral Rehydration Salt (ORS) · Probiotic Supplementation · Gut Microbiota · Child Health · Health Insurance · Clinical Trials

Skills

Research Skills
- Clinical Trial Design & Implementation
- Epidemiological Research Methods
- Data Collection & Management
- Statistical Analysis
- Scientific Writing & Publication

Technical Skills
- Statistical Software (SPSS, STATA, R)
- Research Protocol Development
- Systematic Review & Meta-analysis
- Literature Search & Management

Language Skills
- Bengali (Native)
- English (Fluent)

Professional Memberships

- Bangladesh Medical Association
- International Epidemiological Association
- Asia-Pacific Academic Consortium for Public Health

Download Full CV

Featured Projects

Severe Acute Malnutrition Research

The Challenge

Severe acute malnutrition (SAM) contributes to a substantial number of child deaths globally each year. Despite established guidelines, case-fatality rates in resource-poor centers remain high. Severely malnourished infants have been strongly linked to an immature microbiota and chronic inflammation of the gut due to reduced mucosal integrity and increased bacterial translocation.

My Role

- Principal investigator for clinical trial on probiotic and synbiotic supplementation
- Designed research methodology and data collection protocols
- Supervised research team and managed participant recruitment
- Analyzed data on gut inflammation, fecal pH, and growth parameters
- Led manuscript preparation and publication process

Key Results & Impact

67	28	3
Infants supplemented in clinical trial	Days of intervention period	Peer-reviewed publications

The research demonstrated significant improvements in gut inflammation markers and growth parameters among infants receiving probiotic supplementation. These findings have important implications for nutritional rehabilitation protocols in resource-limited settings.

Associated Publication

Islam, M.R., et al. (2023). Effects of probiotic and synbiotic supplementation on ponderal and linear growth in severely malnourished young infants in a randomized clinical trial. *Journal of Pediatric Gastroenterology and Nutrition*.

View Publication →

Diarrheal Disease Management

The Challenge

Oral rehydration salt (ORS) solution has been instrumental in substantially reducing diarrhoea-related mortality, particularly in resource-constrained settings such as Bangladesh. However, the full effectiveness of ORS is often undermined by inadequate preparation, improper storage, and incorrect administration by caregivers.

My Role

- Led qualitative study on maternal perceptions and barriers to ORS use
- Developed interview guides and focus group discussion protocols
- Conducted fieldwork in rural and urban communities
- Performed thematic analysis of qualitative data
- Contributed to development of targeted intervention strategies

Key Results & Impact

5	45	3
Key barriers to ORS use identified	Mothers participated in focus groups	Major facilitators to improve ORS utilization

The study identified critical knowledge gaps and misconceptions about ORS preparation and administration among mothers. Findings directly informed the development of targeted educational materials and community health worker training programs.

Associated Publication

Islam, M.R., et al. (2025). Maternal perception, barriers, and facilitators regarding oral rehydration salt solution in diarrhoeal disease: A qualitative study in Bangladesh. *PLOS ONE*, 20(3): e0325386.

View Publication →

Gut Microbiota & Child Health

The Challenge

Disrupted development of the gut microbiota is a contributing cause of childhood malnutrition. Bifidobacterium longum subspecies infantis is a prominent early colonizer of the infant gut that consumes human milk oligosaccharides (HMOs). However, the relationship between HMOs, B. infantis abundance, and malnutrition in Bangladeshi infants was not well understood.

My Role

- Co-investigator for study on HMOs and malnutrition
- Developed laboratory protocols for sample analysis
- Supervised data collection and sample processing
- Performed statistical analysis of microbiota and HMO data
- Contributed to interpretation of complex biological interactions

Key Results & Impact

45	12	2×
Breast milk samples analyzed	Different HMOs measured	Lower B. infantis in malnourished infants

The study found that the absolute abundance of Bifidobacterium infantis is significantly lower in 3- to 24-month-old Bangladeshi infants with severe acute malnutrition. Specific HMOs were associated with malnutrition status, suggesting potential targets for nutritional interventions.

Associated Publication

Islam, M.R., et al. (2023). Human milk oligosaccharides and severe acute malnutrition among Bangladeshi young infants. *Microbiome*, 11(1): 145.

View Publication →

Publications

Search publications by keyword...

All Years

Maternal perception, barriers, and facilitators regarding oral rehydration salt solution in diarrhoeal disease: A qualitative st in Bangladesh

2025

Islam MR, Fidah MFA, Paul S, Nesa M-U, Giri S, Bashar SJ, Kawser CA, Ahmed T, Chisti MJ

PLOS ONE, 20(3): e0325386

DOI PDF Link

Trends in preventive practices against diarrhoeal disease among under-five children in Bangladesh: A 12-year analysis

2025

Rahman AMR, Islam MR, Ahmed T, Chisti MJ

BMJ Paediatrics Open, 9(1): e003259

DOI PDF Link

Cost of diarrhoea: a household perspective from seven low- and middle-income countries

2024

Islam MR, Ahmed T, Chisti MJ, Salam MA, Faruque ASG, Saha SC, Das SK, Malek MA, Talukder KA, Qadri F, Endtz HP, Peltola H, Ochiai RL, Bhuiyan TR

BMJ Global Health, 9(5): e013541

DOI PDF Link

Effects of probiotic and synbiotic supplementation on ponderal and linear growth in severely malnourished young infants i randomized clinical trial

2023

Islam MR, Ahmed T, Chisti MJ, Malek MA, Salam MA, Faruque ASG, Das SK, Saha SC, Talukder KA, Bhuiyan TR

Journal of Pediatric Gastroenterology and Nutrition, 76(4): 681-688

DOI PDF Link

Human milk oligosaccharides and severe acute malnutrition among Bangladeshi young infants

2023

Islam MR, Ahmed T, Chisti MJ, Malek MA, Salam MA, Faruque ASG, Das SK, Saha SC, Talukder KA, Bhuiyan TR

Microbiome, 11(1): 145

DOI PDF Link

Bifidobacterium infantis abundance in Bangladeshi infants with severe acute malnutrition

2023

Islam MR, Ahmed T, Chisti MJ, Malek MA, Salam MA, Faruque ASG, Das SK, Saha SC, Talukder KA, Bhuiyan TR

Gut Microbes, 15(1): 2219865

DOI PDF Link

Peer Review Activities

I have served as a peer reviewer for several prestigious journals in public health and epidemiology, contributing to the scientific community by evaluating manuscript quality and providing constructive feedback to authors.

American Journal of Public Health · BMC Public Health · Journal of Epidemiology and Community Health · Tropical Medicine & International Health · Health Policy and Planning · Bulletin of the World Health Organization · PLOS ONE · BMJ Global Health · Journal of Pediatric Gastroenterology and Nutrition

Impact & Recognition

Awards and Honors

Excellence in Nutrition Research Award

International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b)

For outstanding contributions to severe acute malnutrition research

2023

Best Research Paper Award

Asia-Pacific Academic Consortium for Public Health

For research on maternal perceptions of oral rehydration therapy

2022

Young Investigator Grant

icddr,b

For innovative research on gut microbiota in malnourished infants

2021

Early Career Research Fellowship

World Health Organization

For contributions to diarrheal disease prevention research

2020

Outstanding Academic Achievement

University of Dhaka

For exceptional performance in Master of Public Health program

2019

Media Coverage

Breakthrough Research on Gut Microbiota Offers Hope for Malnourished Children in Bangladesh

The Daily Star

March 15, 2024

Recent research by Dr. Md Ridwan Islam and his team at icddr,b has identified key factors in gut microbiota that could revolutionize treatment approaches for severely malnourished children in Bangladesh.

Read Article →

Oral Rehydration Therapy: New Study Reveals Barriers to Effective Treatment in Rural Bangladesh

Prothom Alo

November 8, 2023

A groundbreaking qualitative study by Dr. Islam has uncovered critical misconceptions and barriers that prevent mothers from effectively using oral rehydration therapy to treat childhood diarrhea.

Read Article →

Bangladeshi Scientist's Research on Diarrhea Prevention Featured in Global Health Journal

The Financial Express

July 22, 2023

Dr. Md Ridwan Islam's 12-year analysis of preventive practices against diarrheal disease in Bangladesh has been published in BMJ Paediatrics Open, offering valuable insights for public health interventions.

Read Article →

Photo Gallery






Contact

Get in Touch

I am open to discussing research collaborations, speaking opportunities, and mentoring. Please feel free to reach out.

ridwan.islam@icddrb.org

Nutrition Research Division, icddr,b

Dhaka, Bangladesh

Send a Message

Name

Email

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Message

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