

## CENTRE OF EXCELLENCE FOR SCIENCE OF IMPLEMENTATION AND SCALE-UP (CoE-SISU)

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Established in 2016, the main objective of the CoE-SISU is to timely generate and embed knowledge related to healthcare practice. The Centre aims to bridge gaps to allow successful scaling up and implementation of interventions by focusing on testing different methodologies, generating evidence-based interventions and innovations, and translating them into standard protocols for policy-makers in Bangladesh.

Research conducted at the Centre reviews potential evidence of successful interventions that can showcase the application of science of implementation for scaling-up. Guidelines and policy briefs are produced for policymakers on implementation of various health programmes and scale-up in Bangladesh. Advocacy efforts include the development of communication materials to showcase successfully implemented or scaled up programmes. Training and short courses are offered under the Centre on implementation research and, monitoring and evaluation to build capacity of development professionals, implementers, researchers and government officials.

### RESEARCH PROJECTS ONGOING IN 2021 *(updated till September, 2021)*

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#### - **THE ETHICS OF HEALTH POLICY EXPERIMENTS: A GLOBAL FRAMEWORK FOR DESIGN AND OVERSIGHT**

PI: Professor Malabika Sarker, Associate Dean, and Director, CoE-SISU, BRAC JPGSPH.

Co-PI: Atonu Rabbani, Associate Scientist, BRAC JPGSPH.

Focal: Dr Mrityika Barua, Assistant Scientist, BRAC JPGSPH.

Timeline: October 2017 - December 2020

Objective:

- To test and refine 'deliberative interviews,' a cognitive qualitative interview technique based on deliberation to determine its applicability in designing a framework that examines ethical aspects of health policy experiments;
- To assess if deliberative interviews are socially and culturally acceptable in the four study countries;
- To identify if a higher knowledge level on health issues can be reached by using the deliberative interview style, which takes into account major, widely-known aspects of a particular health theme and has both interviewer and interviewee engage actively in the interview.

Methodology: Qualitative

Donor:

- Wellcome Trust, UK;

- University of Heidelberg, Germany.

Partners:

- University of Heidelberg, Germany;
- Harvard T.H. Chan School of Public Health;
- School of Public Health and Social Sciences, Muhimbili University of Health and Allied Sciences (MUHAS), Tanzania

- **SYNTHESIS AND TRANSLATION OF RESEARCH AND INNOVATIONS FROM POLIO ERADICATION (STRIPE)**

PI: Professor Malabika Sarker, Associate Dean and Director, CoE-SISU, BRAC JPGSPH.

Co-PI: Dr Yameen Mazumder, Project Implementation Specialist, BRAC JPGSPH.

Focal: Dr Humayra Binte Anwar, Lecturer, BRAC JPGSPH.

Timeline: April 2018 - December 2022

Objectives:

- Map knowledge content from the Global Polio Eradication Initiative (GPEI);
- Package GPEI knowledge assets for a global health course and training materials on implementation science;
- Validate GPEI-IS course, MOOC and training materials for the clinic;
- Disseminate GPEI-IS knowledge products, courses, IS clinics to different targeted audiences.
- Track impact of GPEI-IS knowledge product over time.

Methodology: Mixed method

Donor: Bill and Melinda Gates Foundation

Partner: Johns Hopkins Bloomberg School of Public Health.

- **A MEDIA EXPERIMENT TO REDUCE INTIMATE PARTNER VIOLENCE IN BANGLADESH**

PI: Professor Malabika Sarker, Associate Dean, and Director, CoE-SISU, BRAC JPGSPH.

Co-PI: Atonu Rabbani, Associate Scientist, BRAC JPGSPH.

Focal: Mushfiqur Rahman, Research Associate, BRAC JPGSPH.

Timeline: June 2019 - May 2021

Objective:

To reduce the risk of bacterial and parasitic infection through flooring reconstruction in homes that currently have dirt/mud floors.

Methodology: Qualitative

Donor:

- South African Medical Research Council (SAMRC);
- The World Bank;
- Grand Challenges Canada.

Partner: Association of Development for Economic and Social Help (ADESH)

## - **OLD AGE ALLOWANCE**

PI: Atonu Rabbani, Associate Scientist, BRAC JPGSPH.

Co-PI:

- Viola Asri, Postdoctoral Researcher, University of Konstanz;
- Kumar Biswas, Research Coordinator, The World Bank;
- Sebastian Fehrer, Professor, Economics of Social Policy, University of Bremen;
- Urs Fischbacher, Professor, Applied Research in Economics, University of Konstanz;
- Katharina Michaelowa, Professor, Political Economy and Development, University of Zurich.

Focal:

- Viola Asri, Postdoctoral Researcher, University of Konstanz;
- Kumar Biswas, Research Coordinator, The World Bank.

Timeline: February 2019 - December 2020

Objective:

To make the selection of beneficiaries more pro-poor by enabling the local government representatives to apply the eligibility criteria prescribed by the national government and make the selection based on the provided data on the target group.

Methodology: Quantitative

Donor:

- University of Zurich, Switzerland;
- Thurgau Economic Research Institute;
- University of Konstanz, Germany.

Partners:

- Department of Social Services, Ministry of Social Welfare, Government of People's Republic of Bangladesh;
- ARCED Foundation.

## - **CLIMATE CHANGE, MIGRATION AND HEALTH SYSTEMS RESILIENCE IN HAITI AND BANGLADESH (CLIMHB)**

PI: Professor Malabika Sarker, Associate Dean and Director, CoE-SISU, BRAC JPGSPH.

Focal:

- Dr Mowtushi Matin, Senior Research Associate, BRAC JPGSPH;
- Rafee Muhammad Tamjid, Assistant Manager, Communications, BRAC JPGSPH.

Timeline: June 2019 - December 2022

Objective:

To analyse the capacities and vulnerabilities of health systems in Haiti and Bangladesh, through the lens of climate change-induced migration flows.

Methodology: Mixed method

Donor:

- French National Research Agency (ANR)
- Institut De Recherche Pour LE Développement (IRD)

Partner: CEPED – IRD

## - **MILLION COOL ROOFS CHALLENGE**

PI: Professor Malabika Sarker, Associate Dean, and Director, CoE-SISU, BRAC JPGSPH.

Co-PI: Atonu Rabbani, Associate Scientist, BRAC JPGSPH.

Focal: Md. Shihab Ad Din, Senior Research Assistant, BRAC JPGSPH.

Timeline: July 2019 - December 2020.

Objective:

To improve access to sustainable cooling through the rapid scaling of cool roofs in countries with large numbers of people facing heat stress risks.

Methodology: Mixed method

Donors:

- The Institut de Recherche pour le Développement (IRD);
- France Nesta Enterprise Ltd.

Partner: Department of Architecture, BRAC University

## - **IMPLEMENTATION FIDELITY OF TB PROGRAMME IN DETECTING CHILDREN WITH TUBERCULOSIS**

PI: Professor Malabika Sarker, Associate Dean and Director, CoE-SISU, BRAC JPGSPH.

Co-PI: Professor Syed Masud Ahmed, Director, CoE-HS&UHC, BRAC JPGSPH.

Co-I:

- Avijit Saha, Research Fellow, BRAC JPGSPH;
- Dr Mrityika Barua, Assistant Scientist, BRAC JPGSPH;
- Fouzia Khanam, Senior Research Fellow, BRAC JPGSPH;
- Bushra Zarin Islam, Senior Research Associate, BRAC JPGSPH.

Coordinator:

- Avijit Saha, Research Fellow, BRAC JPGSPH;
- Dr Mrityika Barua, Assistant Scientist, BRAC JPGSPH.

Timeline: May 2020 - December 2020

Objective:

To investigate the implementation fidelity and the bottlenecks to identify Child-TB in Bangladesh.

Methodology: Mixed method

Donor: Global Fund

Partner: BRAC

- **DEVELOPING AND TESTING A RISK STRATIFICATION APPROACH SCREENING USING GUIDELINES AND ARTIFICIAL INTELLIGENCE FOR DIABETIC RETINOPATHY IN PEOPLE WITH DIABETES IN BANGLADESH.**

PI: Professor Malabika Sarker, Associate Dean and Director, CoE-SISU, BRAC JPGSPH.

Co-I:

- Malay Kanti Mridha, Professor and Director, CNCDN, BRAC JPGSPH;
- Dr Mehedi Hasan, Senior Lecturer, BRAC JPGSPH;
- Ipsita Sutradhar, Senior Research Fellow, BRAC JPGSPH.

Focal: Ipsita Sutradhar, Senior Research Fellow, BRAC JPGSPH.

Timeline: October 2020 - June 2021

Objective:

- Develop and validate a simple DR risk stratification score and tool in the Bangladeshi population with diabetes;
- Pilot the use of the DR risk stratification approach for targeted screening in a real-world clinical setting in Bangladesh.

Methodology: Mixed-method

Donor: Fred Hollow Foundation Australia

## - **EFFECTS OF AGE AT MARRIAGE AND EDUCATION ON HEALTH OF MOTHERS AND CHILDREN**

PI:

- Erica Field, Professor, Economics and Global Health, Duke University;
- Kate Vyborny, Associate Director, DevLab, Duke University;
- Professor Malabika Sarker, Associate Dean and Director, CoE-SISU, BRAC JPGSPH;
- Nina Buchmann, PhD Candidate, Economics, Stanford University;
- Rachel Glennerster, Chief Economist, Foreign, Commonwealth and Development office, UK;
- Shahana Nazneen, Consultant, Innovations for Poverty Action;
- Xiao Yu Wang, Assistant Professor, Economics, Duke University and Chief Economist, CRI.

Coordinator: Fatema Mohammad, Senior Research Assistant, BRAC JPGSPH.

Timeline: September 2020 - August 2022

Objective:

- Assess the impact of increased marriage age and/or human capital on reproductive health;
- Assess the impact of increased marriage age and/or human capital on women's long-term physical and psychological well-being;
- Assess the impact of increased marriage age and/or human capital on child health;
- Assess potential channels through which marriage age and/or human capital influence maternal and child health

Methodology: Quantitative

Donor: National institutes of health, USA

Partner: Duke University

## - **VALIDATION OF FINGER IMAGE: A MIXED-METHOD STUDY**

PI: Professor Malabika Sarker, Associate Dean and Director, CoE-SISU, BRAC JPGSPH.

Focal:

- Mushfiqur Rahman, Research Associate, BRAC JPGSPH.
- Saima Mehjabeen, Senior Research Associate, BRAC JPGSPH.

Timeline: September 2020 - August 2021

Objective: To measure the accuracy of finger image testing among children under 5 and to explore the feasibility of the implementation in specific urban slums.

Methodology: Embedded mixed-method approach.

Donor: Simprints Technology Limited.

- **CLINICAL IMPACT AND ECONOMIC FEATURES OF A COMMUNITY HEALTH WORKER-LED LOW-SODIUM SALT INTERVENTION TO REDUCE BLOOD PRESSURE AT THE POPULATION LEVEL IN RURAL BANGLADESH: A CLUSTER-RANDOMIZED TRIAL**

PI:

- Professor Malabika Sarker, Associate Dean and Director, CoE-SISU, BRAC JPGSPH.
- Pascal Geldsetzer, Assistant Professor of Medicine, Primary Care and Population Health, Stanford University School of Medicine

Focal:

- Animesh Talukder, Research Fellow, BRAC James P Grant School of Public Health, BRAC University

Timeline: October 2021 – June 2022

Objective: The primary objective of this study is to assess the effectiveness of a low-sodium salt substitute (LSSS) (a compound in which a percentage of the sodium chloride [NaCl] is replaced by potassium chloride [KCl] and/or magnesium sulfate [MgSO<sub>4</sub>]) for blood pressure reduction in a general population of adults (aged 18 years and older) in rural Bangladesh. Several methods of intervention delivery will be compared in separate study arms to determine the optimal approach for low-sodium salt provision in this setting. Besides, our study will include a study of the willingness-to-pay of our target population for an LSSS.

Methodology: Cross Sectional

Donor: Leland Stanford Junior University.

Partners:

- Leland Stanford Junior University
- BRAC James P Grant School of Public Health, BRAC University

- **TRANSFORMING HOUSEHOLDS WITH REFRACTION AND INNOVATIVE FINANCIAL TECHNOLOGY (THRIFT) (PRE-FORMATIVE PHASE)**

PI: Dr. Atonu Rabbani

Focal: Sharmin Akter Shitol, Research Associate, BRAC JPGSPH

Timeline: July 2021 to December 2021

Objective: To learn about the OAA online banking system in Bangladesh through a desk review of relevant documents and interviews with relevant planners and implementers

Methodology: Qualitative

Donor: Wellcome Trust

Partners: Queen's University Belfast (primary)

- **IMPLEMENTATION RESEARCH IN HEALTH CAMPAIGN EFFECTIVENESS: A RETROSPECTIVE STUDY IN IMMUNIZATION RELATED CAMPAIGN INTEGRATION IN BANGLADESH**

PI: Saima Mehjabeen, Senior Research Associate, BRAC JPGSPH

Co-PI: Humayra Binte Anwar, Research Associate, BRAC JPGSPH

Focal: Saima Mehjabeen, Humayra Binte Anwar

Timeline: 1 June 2021 to 31 July 2022

**Objective:** This retrospective study will help us to gain a deeper understanding about the context and factors in integration of health campaigns, facilitating factors and challenges during implementation, and the overall impact on the success of the program outcome. Besides, it will help us to formulate recommendations and suggestions regarding integrating health campaign for future program. These insights will assist in creating a set of design principles and considerations that will reflect the need of conducting health campaign integration in current country context and guide our national policy makers to review national policies to build on solutions for emerging issues in the field of infectious disease by aligning with Immunization Agenda 2030 by World Health Organization.

**Methodology:** Mixed-method

**Donor:** Task Force for Global Health with Bill & Melinda Gates Foundatio

**Partners:** Task Force for Global Health

- **IMPLEMENTATION RESEARCH – FOR DHIS2 APP-BASED INDIVIDUAL TRACKING OF CHILDREN FOR VACCINATION (EPI E-TRACKER) IN MOULAVIBAZAR DISTRICT AND ZONE-5 OF DHAKA SOUTH CITY CORPORATION**

PI: - Professor Malabika Sarker, Associate Dean and Director, CoE-SISU, BRAC JPGSPH

Focal: Avijit Saha

Timeline: 1 April 2021 to 30 June 2022

**Objective:** The purpose of this implementation research is to document and explore the DHIS2 app-based individual e-Tracker system used for vaccinating children in Moulavibazar District and zone-5 of Dhaka South City Corporation of Bangladesh and identify challenges, lessons learned, solutions to scale-up, and success stories. Detailed steps of implementation, including training, resource mobilization, field monitoring, challenges at the field level, and acceptance of the new system by health managers and workers and beneficiaries, will also be reviewed

**Methodology:** Mixed-method

**Donor:** United Nation's Children Fund

**Partners:** UNICEF, EPI



- **ENHANCING NUTRITION SERVICES TO IMPROVE MATERNAL AND CHILD HEALTH IN AFRICA AND ASIA (ENRICH): ENDLINE EVALUATION IN BANGLADESH**

PI:

- Prof. Dr. Daniel William Sellen (Main PI)
- Professor Malabika Sarker, Associate Dean and Director, CoE-SISU, BRAC JPGSPH (Country PI)

Focal: Avijit Saha

Timeline: 1 July 2021 to 30 September 2022

**Objective:** The main purpose of the proposed endline evaluation is to evaluate the progress of the program since inception as well as to generate and share data that would help the local, sub-national, national, and international policymakers to improve the implementation of the MNCH program in similar communities building on the lessons learned from this evaluation. The endline evaluation will focus on measuring the effectiveness of the programme towards achieving targets since baseline.

**Methodology:** Quasi-experimental Mixed-method

**Donor:** World Vision

**Partners:** University of Toronto (UofT), World Vision Bangladesh (WVB)

- **YOUTH WITH DISABILITIES' LIVED EXPERIENCES, ASPIRATIONS, AND CURRENT ENGAGEMENTS IN LIVELIHOODS IN BANGLADESH, AND HOW THEY CAN SHARE THEM WITH LOCAL DECISION-MAKERS**

PI: Professor Malabika Sarker, Associate Dean and Director, CoE-SISU, BRAC JPGSPH

International PI: Dr Margo Greenwood

Focal/Coordinator: Sayema Akter, Research Fellow, BRAC JPGSPH; Mrittika Barua, Assistant Professor, BRAC JPGSPH

Timeline: July 2020- December 2021

**Objective:** The study aims to understand the experiences, aspirations, and challenges of youths with disabilities in their livelihood in Bangladesh and, to explore the inclusion of young people with disabilities into policy dialogues around the implementation of SDG8: Decent work and economic growth.

**Methodology:** Qualitative

Partner: Sightsavers UK, Sightsavers Bangladesh

Donor: British Academy