

# RESEARCH AND DEVELOPMENT

## Public-private partnership emphasized

For innovative and cost-effective strategies and treatment regimens, the Bangladesh Government promotes research and development activities in public health, alongside the provision of routine healthcare to the people. Several public, private and autonomous institutions, including Bangladesh Medical Research Council (BMRC), National Institute of Preventive and Social Medicine (NIPSOM), National Institute of Cardiovascular Diseases (NICVD), Institute of Mother and Child Health (ICMH), icddr, and James P. Grant School of Public Health under BRAC University are involved in these research activities. This chapter provides a brief introduction of the Bangladesh Medical Research Council and highlights the research activities done in different institutions during 2011.

### **Bangladesh Medical Research Council**

Established in 1972 by Father of the Nation Bangabandhu Sheikh Mujibur Rahman, the Bangladesh Medical Research Council (BMRC) is an autonomous body under the Ministry of Health and Family Welfare (MoHFW). As per resolution of the Government of Bangladesh, the BMRC is the only authorized body for giving clearance to health research protocols in the country. The objectives of the BMRC are to identify problems and issues relating to medical and health sciences and to determine priority areas of research on the basis of healthcare needs, goals, policies, and objectives. The mission of the Council is to create effective and quality healthcare facilities for the whole population of the country by promoting health research through strengthening of research facilities, training and dissemination of research results. Honorable Prime Minister Sheikh Hasina inaugurated the newly-built BMRC Bhaban on 14 October 2010.

The BMRC is engaged in the following activities since its inception, encompassing newer issues as and when necessary:

**Research funding:** The BMRC organizes and promotes scientific research in various fields of medicine, public health, reproductive health, and nutrition, with specific references to primary

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healthcare needs for application and utilization of the research results. The proposals that are received are evaluated by the Scientific Review Committee and noted experts in the subject. The BMRC provides research funds both from revenue budget and from grants received from development partners.

**Publication:** The BMRC publishes the internationally-recognized quarterly journal 'BMRC Bulletin' covered by various indexing agencies. The BMRC Bulletin disseminates research results for proper utilization. RICH (Research Information and Communication on Health) is published twice a year, containing abstracts of important research works; CAS (Current Awareness Service) is published annually, containing the titles from different journals published in Bangladesh.

**Training:** Several workshops are organized every year by BMRC to improve human resource for high-quality research in the country. The BMRC conducts training courses on research management, training of trainers (TOT) on HINARI (Health Inter-network Access to Research Initiative) for research, research methodology, data-analysis, project development, biostatistics, science writing, health systems research, ethical issues in health research, and the use of statistical package (SPSS) for data analysis, with technical support from WHO, Government of Bangladesh, and NGOs.

**Ethical clearance:** The BMRC is the only government-approved organization for ethical clearance to research protocols and has a National Research Ethics Committee (NREC) for this task. Each project proposal approved by the Scientific Review Committee must get ethical clearance

before funding by the Council. The NREC also provides ethical clearance to studies not funded by Bangladesh or foreign donors.

The specific functions of the BMRC are as follows:

1. Coordinate health research activities by liaising with all stakeholders
2. Assist the Government to set health research priorities
3. Review preliminary and final research reports and give advice on strategic implications of completed research projects and send review reports to the Directorate General of Health Services and Directorate General of Family Planning
4. Advise the government departments and international agencies on all matters relating to health research
5. Facilitate coordination among the organizations and institutions at various levels so that the health research strategy operates in a coherent manner rather than fragmented and uncoordinated activities
6. Assign registration to any health research to be conducted in Bangladesh as a pre-requisite for any funding (national or international)
7. Advise Government on the gaps, synergies, and overlaps that exist as well as on the appropriateness of the research work, its budget, achievements, and emphases
8. House NREC (National Research Ethics Committee), previously called Ethical Review Committee, set standards, give advice to the Departments and the Ministry of Health and Family Welfare on the management of research ethics for Bangladesh, and arbitrate on the matters of ethics
9. Review all clinical trials of both non-registered medicinal substances in Bangladesh and new indications of already-registered medicinal substances through the NREC
10. Advise the Drug Administration through NREC in ensuring that the drugs available in the country fulfill the necessary requirements for safety, quality, and efficacy and that the decision to register a drug is in the interests of public health
11. Scrutinize research issues having religious or social sensitivity through NREC
12. Provide ethical clearance through NREC to the international collaborative research

involving Bangladeshi population while the administrative approval shall be given by the Government

13. Sponsor and coordinate multicenter commissioned research on areas of national importance
14. Establish and further strengthen the BMRC-sponsored research institutions and centers for conducting studies on areas of national priority
15. Take initiative to enhance the in-house human capacity, create appropriate physical facilities and logistics, and strengthen linkages with all stakeholders involved in health research.

### Seminar and Symposia

Meeting of South Asian Forum for Health Research (SAFHeR) was held on 5-7 February 2012 at India International Centre, New Delhi, India. Prof. Dr. Mohammad Moazzam Hossain, Senior Vice Chairman, Professor Dr. Md. Habibe Millat, Director (Honorary), and Dr. Mahmood-uz-Jahan, Deputy Director of BMRC, Mohakhali, Dhaka, participated in this meeting. The program was inaugurated by Shri Ghulam Nabi Azad, Hon'ble Minister of Health and Family Welfare, Government of India, as Chief Guest. Shri S. Gandhiselvan, Hon'ble Minister of State for Health and Family Welfare, Government of India and Smt. Preneet Kaur, Hon'ble Minister of State for External Affairs, Government of India, were the Guests of Honor. Dr. V.M. Katoch, Secretary, Department of Health Research, Ministry of Health and Family Welfare and Director General, Indian Council of Medical Research, delivered welcome address in that meeting. Director, BMRC, gave a proposal to become the host of the next SAFHeR meeting in Dhaka at the 40th Anniversary of BMRC.

The BMRC organized the Dissemination Seminar on the Pilot for Testing Delivery Mechanisms for Newborn Vitamin A Supplementation (NBVAS) in Bangladesh, in collaboration with Micronutrient Initiative. The seminar was held on 31 January 2012 at BMRC, Mohakhali, Dhaka. One hundred participants from various disciplines attended the seminar. Prof. Dr. Mahmud Hasan, Chairman, BMRC, moderated the scientific session.

The introductory workshop on Understanding and Using Systematic Reviews and Meta-analysis to Inform Health Decisions was held on 27 November 2011 at BMRC Bhaban, Mohakhali, Dhaka. Dr. Prathap Tharyan, Professor, Department of Psychiatry and Director, South Asian Cochrane

Centre, Christian Medical College, Vellore, Tamil Nadu, India, was present as a speaker in this workshop. Thirty-six participants (postgraduate doctors) from different disciplines participated in this workshop.

The seminar on Current Concept of Autism and Evidence-based Treatment of Autism was held on 28 July 2011. Prof. Dr. Syed Modasser Ali, Adviser to the Honorable Prime Minister on Health and Family Welfare, Government of the People's Republic of Bangladesh, was Chief Guest in this seminar. Dr. AFM Haque, MD MPH and Medical Director, CPC Behavioral Health Care, USA, presented an important paper on Autism. Sixty-four participants, including pediatricians, professors, directors, and principals from different institutions participated in this seminar.

Dr. Paul Garner, Professor, Liverpool School of Tropical Medicine, Pembroke Place, Liverpool, UK and Dr. Prathap Tharyan, Professor of Psychiatry and Associate Director, CMC, Vellore, Director, South Asian Cochrane Network & Centre, presented papers on "systematic reviews" to the BMRC personnel on 17 July 2011 in BMRC, Mohakhali, Dhaka. Thirty-five participants attended this seminar.

The workshop on Ensure Health Care for All was held on 21 and 23-24 April 2011 at BMRC. Professor Dr. Gowher Rizvi, Adviser to the Honorable Prime Minister on International Affairs, Government of the People's Republic of Bangladesh, was Chief Guest in this seminar. Professor Mr. Aurthur Gurson and Donna Green, Virginia University, USA, presented many important papers on the topic. Thirty-three participants from different institutions attended the workshop.

The workshop on Project Development, Data Collection, Data Analysis and Report Writing was held on 27 February 2011 to 13 April 2011, and the same was repeated on 29 May 2011 to 28 July 2011 at BMRC, Mohakhali, Dhaka. A total of forty participants from different medical colleges, postgraduate institutions, upazila health complexes, and NGOs attended the workshop, with Professor Dr. Gowher Rizvi, Adviser to the Honorable Prime Minister on International Affairs, Government of the People's of Bangladesh, as Chief Guest and Professor Dr. Khandaker Md. Shefyetullah, Director General, Directorate General of Health Services, Mohakhali, Dhaka, as Special Guest. Professor Dr. Gowher Rizvi distributed certificates among the participants on 13 April 2011 at BMRC.

**The BMRC granted funds for 34 research protocols in the following topics:**

1. Ocular Injury: Incidence and prevalence in rural Bangladesh
2. Comparison of high-dose and low-dose atorvastatin in the reduction of carotid intimal-medial thickness in patients with coronary artery diseases
3. Prevalence of metabolic syndrome and its correlation with cardiovascular disease and diabetes mellitus in an urban community of Bangladesh
4. Biochemical profile of the drug-abusers undergoing detoxification (TC, DC, ESR, RBS, and CRP)
5. Influence of perceived service quality and socioeconomic predictors on utilization of community clinic
6. National asthma prevalence study in Bangladesh, 2011
7. Pattern of contact dermatitis among bakery workers in Dhaka city
8. Moving beyond cancer; immediate impact of mastectomy on the quality of life of breast cancer patients
9. Association between periodontal disease and elevated blood glucose level: A case-control study
10. Impact of educational booklet on cardiac rehabilitation and secondary prevention of cardiovascular diseases
11. Man's role in making pregnancy safer to reduce maternal morbidity and mortality in rural Bangladesh
12. Evaluation of iron store by serum ferritin in voluntary blood donors of Bangladesh
13. Hepatitis B virus and sexually transmitted infections (STIs) among injecting drug-abusers undergoing detoxification
14. Factors affecting postnatal care coverage in rural Bangladesh
15. Factors contributing to poor compliance with anti-TB treatment among tuberculosis patients in rural Bangladesh
16. Incidence and prevalence of spinal cord injury (SCI) and its associated risk factors in Bangladesh

17. Knowledge, attitudes, and practices (KAP) of health service providers towards cerebral palsy in Bangladesh
  18. Effects of statins—alone or in combination—on lowering serum lipoprotein (a) and LDL cholesterol in patient with hyperlipidemia
  19. Assess the knowledge and awareness of tribal community regarding existing spread of HIV/AIDS in Bangladesh
  20. Policies, practices, and barriers regarding evidence-based delivery and newborn practices in Bangladesh: A qualitative research
  21. Appearance of Microalbuminuria among type 2 diabetes according to duration of diabetes mellitus
  22. Prevalence of dyspepsia and peptic ulcer disease in general population of Bangladesh
  23. Prasugrel and Clopidogrel-induced platelet inhibition in diabetic and non-diabetic high-risk NSTEMI patient undergoing coronary intervention (PCI: DHAKA)
  24. Impact of educational intervention in reducing NCD risk indicators
  25. Impact of climate change over priority-based infectious diseases in northeastern part of Bangladesh
  26. Serum biomarkers in non-invasive diagnosis of endometriosis
  27. Practice of inhaler-use among the chronic asthma patients in Bangladesh
  28. Influencing factors of failure of glycemic control among diabetic patients attending the outpatient department of BIRDEM Hospital
  29. Determinants of patient-provider interfacing in the community clinics of Bangladesh
  30. Risk factors for urinary bladder carcinoma
  31. Circadian variation in the onset of acute myocardial infarction and clinical presentations of patients attending Cardiology Department of Rajshahi Medical College
  32. Effect of Metformin and Atorvastatin combination vs Metformin alone on inflammatory biomarkers and insulin resistance in patients with type 2 diabetes
  33. Sociodemographic and glycemic status of type 2 diabetic patients with their compliance to management protocol in Sirajganj municipality area—A community-based study
  34. Comparison of risk factors between pulmonary and extra-pulmonary tuberculosis in rural Bangladesh.
- The BMRC Bulletin, in its August 2011, December 2011 and April 2012 issues, published the following 22 original articles and 6 Letters-to-Editor:**
- Issue 37 (2), August 2011: Original Articles*
1. Role of serum procalcitonin and C-reactive protein in the diagnosis of neonatal sepsis
  2. Knowledge about inhaler-use among the chronic asthma patients in selected hospitals
  3. Predictors of depression among older people living in rural areas of Thailand
  4. Immature reticulocyte fraction as a predictor of bone marrow recovery in children with acute lymphoblastic leukemia on remission induction phase
  5. Acute poisoning in southern part of Bangladesh—The case load is decreasing
  6. Eclampsia-scenario in a hospital—A ten-year study
  7. Targeted food supplementation through National Nutrition Program and pregnancy weight gain status in selected upazilas.
- Letter-to-Editor*
8. Status and prospect of community clinic in rural areas of Bangladesh: An overview of health workers.
- Issue 37(3), December 2011: Original Articles*
9. Dorsolateral onlay urethroplasty for long segment anterior urethral stricture: Outcome of a new technique
  10. To compare the efficacy of triple therapy with furazolidone, amoxicillin and omeprazole for two weeks and three weeks in the eradication of *Helicobacter pylori* in Bangladeshi duodenal ulcer patients
  11. Antibody responses after hepatitis B vaccination among maintenance hemodialysis patients
  12. Role of MRI in the evaluation of acoustic schwannoma and its comparison to histopathological findings
  13. Evaluation of the results of posterior decompression, posterolateral fusion and stabilization by pedicle screw and rod in traumatic thoracolumbar fractures

14. Role of red cell distribution width (RDW) in the detection of iron-deficiency anemia in pregnancy within the first 20 weeks of gestation
15. Circulating levels of homocysteine in preeclamptic women

*Letter- to-Editor*

16. A huge acrochordon in labia majora—An unusual presentation
17. Post-hysterectomy inflammatory myofibroblastic tumor: A rare presentation

*Issue 38(1), April 2011: Original Articles*

18. CYP3A genotypes in Bangladeshi tuberculosis patients
19. A postmortem study on the volume of the human thyroid gland
20. Elevated serum homocysteine level has a positive correlation with serum cardiac troponin I in patients with acute myocardial infarction
21. Comparison between prostate volume and intravesical prostatic protrusion in detecting bladder outlet obstruction due to benign prostatic hyperplasia
22. Chronic kidney disease-specific cardiovascular risk factors among non-dialytic patients with chronic kidney disease stage-V—An experience in a specialized hospital
23. A simple biological marker to differentiate the types of Herpes Simplex viruses in resource-limited settings
24. What cannot be measured cannot be done—risk factors for childhood tuberculosis:

*A case-control study*

25. Symptomatic overlap in patients with diarrhea predominant irritable bowel syndrome and microscopic colitis in a subgroup of Bangladeshi population.

*Letter-to-Editor*

26. Congenital absence of one tonsil without any other congenital abnormality: A rare presentation
27. Backpain: An unusual presentation of Castleman's Diseases
28. Constipation—presenting compliant and clinical marker of Parkinson's disease.

**The BMRC issued ethical clearance to the following research projects in 2011:**

1. Effects of nutritional education on people living with HIV/AIDS in Bangladesh
2. Dietary assessment and characteristics of health and nutritional impact of vegetarian diet among rural elderly vegetarian and non-vegetarian
3. Evaluation of patients' satisfaction in Grameen Kalyan, a private health system in the developing world
4. Burden of diabetes mellitus: Experience from urban and rural communities of Bangladesh
5. Treatment of early neuritis in leprosy
6. Efficiency of fund-use in public and private hospitals: A comparative study in relation to attaining MDGs
7. A comparison of costs associated with maternal health in connection with home-based childbirth (delivery) with hospital-based childbirth
8. Quantifying the unmet need for family planning among most at-risk populations in Asia
9. Usefulness and application of the monitoring and evaluation toolkit for indoor residual spraying by the national vector control program
10. Exploring gender-based violence among men who have sex with men, transgenders, and male sex workers in the Asia Pacific region
11. Indoor air pollution: Extent, impact, and prevention
12. Effect of antioxidant vitamins intervention on oral leukoplakia in selected population of Bangladesh
13. The 2011 Bangladesh Demographic and Health Survey (BDHS)
14. Correlation of the outcome of transurethral resection of the prostate (TURP) with preoperative degree of bladder outlet obstruction and detrusor function
16. Arsenic in human milk and assessment of human milk intake in children living in arsenic-contaminated areas in Bangladesh
17. Prevalence of occupational asthma in sericulture workers

18. Evaluation of the role of end-range mobilization technique in the management of patient with adhesive capsulitis of the shoulder joint
19. Relationship between dental diseases and coronary heart disease in diabetic patients
20. Retinopathy in older person without diabetes mellitus
21. Risk factors of impaired glucose tolerance (IGT) and impaired fasting glucose (IFG) among urban population
22. Ocular injuries in patients with major trauma
23. Role of uric acid and dyslipidemia in ischemic stroke
24. Prevalence of NCD-related risk factors among population aged 35-60 years in Dhaka city
25. Epidemiological feature and economic burden of road traffic accidents
26. Underlying factors of attempted suicides: Experience from rural Bangladesh
27. Quality of healthcare services provided to the patients at the medical outpatient department of Dhaka Shishu Hospital
28. Efficacy of polymerase chain reaction for rapid diagnosis of pulmonary tuberculosis from sputum
29. Plasma androgens levels in women with acne vulgaris
30. Prevalence of secretor and non-secretor among the random blood donors
31. Non-communicable diseases among the shopkeepers in Dhaka city
32. A study on the effect of prolonged drinking of saline water on pregnancy outcome
33. Hepatitis B virus infection among the blood donors in Dhaka city
34. Knowledge, attitude, and practice on tobacco-related cancer among the general population of Sharishabari, a rural area of Bangladesh
35. Effect of targeted food supplementation through National Nutrition Program on pregnancy weight gain and birthweight in different chronic energy-deficiency groups
36. Study of risk factors of primary hemorrhagic and ischemic subtypes of acute stroke among patients admitted in tertiary-level hospital in Bangladesh
37. Association between smokeless tobacco consumption and adverse pregnancy outcome among rural women in Bangladesh
38. Spectrum of clinical manifestation of post-kala-azar dermal leishmaniasis (PKDL) in kala-azar-endemic areas of Bangladesh
39. Early outcome of off-pump coronary artery bypass graft (OPCAB) surgery in women
40. Risk factors of suicide and parasuicide in rural Bangladesh
41. Studies of bioactive secondary metabolites of various indigenous plant materials for natural food preservation and non-secretor among the random blood donors
42. Essential health, hygiene and nutrition package for Innovation Fund NGO (NDP) 2011-12
43. Essential health, hygiene and nutrition package by six contacted Scale Fund NGO (NDP), 2009-10
44. A prospective, non-interventional, cohort survey on VTE risk in patients receiving new chemotherapy for cancer
45. 2011 follow-up evaluation of Bangladesh Smiling Sun Franchise Program (BSSFP)
46. Psychotics disorders among yaba/methamphetamine (MA)-dependent subjects
47. Assessing acceptability of sino-implant (II) among Bangladeshi married women of reproductive age
48. Subcutaneous contraceptive injection Depo SubQ Provera 104 TM DepoSubQ/SAYANA acceptability study
49. Nutrition impact on Monga
50. Study of the effectiveness of long-lasting insecticide treated mosquito net (LN) against visceral leishmaniasis vector *Phlebotomus argentipes* in highly-endemic area of Bangladesh
51. Retreatment trial of multi-drug-resistant tuberculosis (MDR-TB)
52. Impact evaluation of behavior change communication and micronutrient supplementation interventions on infant and young child-feeding (IYFC) practices and on childhood stunting and anemias
54. Comparative pharmacokinetic and relative bioavailability study of coated and uncoated Azithromycin (200 mg/5 mL) powder for suspension in healthy Bangladeshi volunteers

55. Pharmacokinetics and bioequivalence study of Etoricoxib 60 mg tablet in healthy Bangladeshi volunteers
56. Catastrophic health expenditure and coping strategies for major illnesses in Rajshahi district, Bangladesh
57. Comparative pharmacokinetic and bioequivalence study of Azithromycin 500 mg tablet in healthy Bangladeshi volunteers
58. Endemicity level of malaria in 15 districts of Bangladesh
59. Cabazitaxel Cohort Compassionate Use Program (CUP) in patients with metastatic hormone refractory prostate cancer previously treated with a docetaxel-containing regimen
60. The combined effect of chemoprophylaxis with Rifampicin and immunoprophylaxis with BCG, in the prevention of leprosy in contacts: A randomized controlled trial
61. Malarial retinopathy and near-infrared spectroscopy in cerebral and severe malaria
62. Study on microbiological and immunological aspects of typhoid fever in Chittagong Medical College Hospital, Chittagong, Bangladesh
63. Cataract impact study—6th year follow-up
64. Polymorphism in ALAD genes and their association with lead exposure and low birthweight
65. Impact of nutrition education on perception and practice of complementary feeding and also monitoring growth rate of children aged 6-8 months living in slum area Dhaka city
66. Comparison of dietary intake and nutritional status among children aged 0-3 years of adolescent mothers and adult mothers
67. Morbidity control for lymphatic filariasis in Bangladesh: Does occupation matter for the progression of morbidity?
68. Knowledge and attitudes towards oral cancer among men in Bangladesh
69. Knowledge and attitudes towards cervical cancer among women in Bangladesh
70. Impact of nutrition education of adolescent girls of garment sector in Dhaka city
71. A study of relative risk of pregnancy complications by nutritional status and age of women
72. Study on the impact of nutrition education in the reduction of the severity of fibrocystic breast disease
73. Impact of nutrition education on the cerebral palsy children on nutritional status and handicap disability
74. Impact of nutrition education on fast food intake on health of teenagers
75. A cohort study of health effects of arsenic exposure in Bangladesh
76. Phase-III randomized study of luteal phase versus follicular phase surgical oophorectomy and tamoxifen in premenopausal women with metastatic hormonal receptor-positive breast cancer
77. Health impact of climate changes in coastal Bangladesh: Water salinity and impact on maternal health
78. MRI of the brain in adult patients with cerebral and severe malaria
79. Decreasing the treatment gap of epilepsy
80. Cross-cultural development of Depression Identification Instrument for SEARO
81. Development of a parent training model for children with long-term disability in Bangladesh
82. LNS-IUS insertion for treating menorrhagia
83. Extent of lymphedema and morbidity management in a lymphatic filariasis-endemic area of Bangladesh
84. Impact of CBR interventions in five districts in NW Bangladesh
85. Risk reduction of climate change impact on health sector through finding out adaptive measures in the context of Bangladesh
86. Effect of nutritional education on prevention of pregnancy complication and safe delivery and low birthweight
87. Impact of nutrition education in last trimester of pregnancy complication and outcome
88. Consanguinity, recessive genes and the risk of breast cancer
89. Use of breast model for early detection of breast cancer among Bangladeshi women: A public-private collaboration

90. A multicentre, randomized trial to detect in vivo resistance of *Plasmodium falciparum* to artesunate in patients with uncomplicated malaria (TRAC)
91. Relationship between degree of HPV infection and micro-RNA profile in cervical cancer
92. Introducing Mifepristone-Misoprostal for menstrual regulation in public-sector facilities in Bangladesh
93. Introducing medical MR in Bangladesh.

## National Institute of Preventive and Social Medicine (NIPSOM)

### Lists of dissertation and thesis (Session: 2010 –2011) supervised at NIPSOM

Name of student	Topic
<b>Course: MPH (Nutrition)</b>	
Md. Solaiman Hossain Mehedi	Assessment of nutritional status of tribal women in Dinajpur District
Dr. Md. Abul Hasnat Shahin	Food hygiene practice among street food-sellers of Dhaka city
Dr. Tanima Ahmed	Food items given by mothers in preparing complementary food and nutritional status of their infants in selected slums of Khulna city
Dr. Dilruba Akhter	Assessment of nutritional status of infants in a selected hilly area of Bangladesh
Dr. Saima Sultana	Childhood obesity and lifestyle of the students in a selected school in Dhaka city
Dr. Suravy Akhter Swarna	Nutritional status and food intake pattern of lactating mothers in selected rural area
<b>Course: MPH (HP &amp; HE)</b>	
Dr. Md. Shahriar Zaman	Knowledge on the effects drug-abuse among the higher secondary school students in Dhaka city
Dr. Suman Kumar Paul	Knowledge on substance-abuse among the rural high school students
Dr. Sultana Razia	Dental caries among the primary school children
Dr. Rehana Parvin	Knowledge on risk factors and complications of coronary heart diseases among the family members of patients
Shipra Talukder	Knowledge on risk factors and complications of hypertension: Comparison between urban and rural communities
Dr. Abdullah al Mamun	Oral health status and treatment need of autistic children attending special school in Dhaka city
Dr. Lazina Muna	Health hazards of tobacco-use among the tobacco-users
Dr. Shamima Begum	Knowledge on oral hygiene among the rural primary school teachers
Shyam Chandra Saha	Knowledge about prevention and control of arsenicosis among the field-level health workers
Shova Mallick	Knowledge on risk factors of breast cancer among the rural women of reproductive age
Arati Rani Barai	Knowledge and practice on blood transfusion among the senior staff nurses working in a tertiary hospital
Modina Khatun	Knowledge of senior staff nurses on prevention and control of hypertension
Gulshan Akter	Dietary habits during antenatal period
Md. Foyejur Rahman	Knowledge on modifiable risk factors of coronary heart diseases among the patients attending a specialized hospital



Table Continued

Name of student	Topic
Mst. Hosnara Khatun	Problems faced by nurse during service delivery in selected public and private hospitals
Most. Sabena Yeasmin	Knowledge on palliative care of cancer patients among senior staff nurses
Md. Afjal Hossain	Knowledge on AIDS among the young adults in a rural community
Major Niyati Ray	Contraceptive prevalence rate among the spouse of non-commissioned army personnel in Dhaka Cantonment
Major Julia Malaker	Knowledge on intestinal parasite among the mothers of a selected urban slum
Md. Nurul Islam	Factors associated with low coverage of tetanus immunization among the women of reproductive age group in a selected upazila
Md. Aminul Islam	Knowledge on Nutritional requirement during pregnancy period among the rural mothers of age 20-30 years
Krishna Chakma	Knowledge of prevention of malaria among the community people in Jurachari Upazila of Rangamati Hill District.
<b>Course: MPH (Epidemiology)</b>	
Dr. Farzana Bashar	Risk factors associated with GDM
Dr. Nehlin Tomalika	Health-related quality of life of women with carcinoma of cervix
Dr. Abu Hassan Mostofa	Stratifying of developing multidrug-resistant tuberculosis in pulmonary tuberculosis patients
Dr. Md. Masud Rana	Lifestyle and blood pressure of rural adults in a selected costal area
Dr. Nusrat Tamanna	Factors influencing adolescent unhealthy lifestyle and behavior
Dr. Sejuti Kabir	Household food security and infant feeding practices in urban infants.
Dr. Md. Ariful Islam	Depression in post-stroke patients
Dr. Mohammad Golam Iqbal	Macro-vascular complications and biochemical parameters in type-2 diabetic patients
Dr. Nasrin Sultana	Adverse events following immunization among infants in an urban slum
Dr. Syed Abul Hassan Md Abdullah	Risk factors of non-fatal drowning among rural children up to five years of age
Dr. Samima Jahan	Epidemiological and clinical attributes of dyspepsia
Dr. Shamsun Nahar Mir	Measures of blood pressure in pregnant women and their body mass index
Dr. Farhana Masum	Home safety measures and unintentional injuries in under-five children
<b>Course: MPH (CM)</b>	
Dr. Shaheen Akhter	Complications and related factors in early pregnancy
Dr. S.M. Wasimul Islam	Glycemic control and anti-diabetic therapies among type 2 diabetes mellitus patients
Dr. Afreen Sultana Danny	Mental stress among physicians working in a tertiary-level hospital
Dr. Sharmin Hossain	Anxiety disorder and smoking
Dr. Nadia Hoque	Use of alternative medicine among rural and urban women
Dr. Humayra Parveen	Mental stress among female school teachers
Dr. Rokshana Sabnom	Outcome and cost estimation of caesarean section in a government and private hospital

Table Continued

Name of student	Topic
Dr. Shafia Khatun Nayan	Utilization of essential service package provided through upazilla health complex in a rural community
Dr. Syeda Musleha Ahmed	Attributes of childhood cancer
Dr. Tanusree Sarkar	Clients' satisfaction regarding health care services provided at community clinic
Dr. Abdullahel Maruf Faruque	Pattern of prescribing drugs among rural practitioners
Dr. Tanusree Sarkar	Clients' satisfaction regarding health care services provided at community clinic.
Dr. Tanjina Ahmed	Perception of a rural community regarding Nipah virus infection
Dr. Zakia Siddiqui	Depression among post-myocardial infarction patients
Dr. Shamima Choudhury	Attributes of hyperbilirubinaemia among early neonates
<b>Course: MPH (PHA)</b>	
Dr. Mofizur Rahman	Compliance of pulmonary tuberculosis patients to DOTs
Dr. Md. Moazzem Hossain Sarker	Knowledge of newly-recruited health assistants about primary healthcare provided through upazila health complexes
Dr. Ahmed Mostafa	Pattern of injuries among the building construction workers at Dhaka city
Dr. Farzana Tarannum	Nutritional status of students in a selected in a secondary school in Dhaka city
Dr. Shaikh Abdullah Al Mamun	Influence of perceived service quality and socioeconomic predictors on utilization of community clinic
Dr. Humaira Nazneen	Knowledge about consequence of tobacco-use among secondary school students in rural area of Bangladesh
Dr. Md. Moinal Hoque	Knowledge about risk factors of obesity and its complications among housewives of reproductive age-group in a selected urban community people
Dr. Showkat Ali	Treatment facilities for patients attending a drug addicts hospital of Dhaka city
Dr. Sukla Chowdhury	RTI/STI patient management in some selected NGOs in Dhaka city
Dr. Razia Akter	Job satisfaction among paramedics workers in selected NGOs
Dr. Hasina Momotaj Hira	Pattern of tobacco-use between 5th year students of Dhaka Medical College and masters students of Dhaka University
Dr. Khadizatul Kobra	Satisfaction of parents of autistic spectrum children in Dhaka Shishu Hospital
Dr. Sanjana Fahim	Knowledge of adverse effects of tobacco-use among the adolescents in rural an urban community
<b>Course: MPH (HM)</b>	
Dr. Syeda Farzana Hossain	Infection control practices among doctors and nurses in a tertiary-level hospital
Dr. Sonya Hal	Knowledge about adverse effect of tobacco-use among the patients in a secondary-level hospital of Bangladesh
Dr. Md. Mofazzal Hossain	Patients' satisfaction about services at outpatient department of Dhaka Dental College and Hospital
Dr. Iftekhar Hossain	Oral health condition among tobacco-users: A comparison between urban and rural community of Bangladesh
Dr. Farjana Jerin	Satisfaction of patients about services at outpatient department of Kumudini Hospital, Tangail

Table Continued

Name of student	Topic
Dr. Shamsul Arefin	Glycaemic status of newborn babies in a selected tertiary-level hospital in Dhaka
Dr. Sayada Maher Sultana	Oral health status of students between an English medium school and general school in Dhaka city
Dr. Md Tariqul Islam	Management of post-operative patients services in the oral and maxillofacial surgery department of Bangabandhu Sheikh Mujib Medical University and Hospital.
Dr. Md. Ashraful Alam	Oral health status among the <5 children at outpatient department of Dhaka Dental College and Hospital
Dr. Md. Aslam Hossain Biswas	Quality of service management in the civil surgeon's office, Pubna
Dr. Farhana Nurul	Utilization of x-ray and imaging facilities in a tertiary-level public hospital of Bangladesh
Tasnova Rahman	Patient safety care practice among the healthcare providers in dental department of Bangabondhu Sheikh Mujib Medical University
Dr. Biswajit Bhowmik	Knowledge of patients about oral hygiene practice at outpatient department of a selected dental college and hospital
Dr. Purnima Sarker	Management of services provided in emergency department of a specialized cardiovascular disease hospital in Dhaka city
Dr. Asheke Fatema Jahan	Quality of services provided to the indoor patients in National Institute of Mental Health
Dr. Mahmud Hossen	Prevention of cross infection in selected tertiary-level hospital
Dr. Parveen Akter	Existing situation of government officers of health department and others at upazila level and below: A comparative study
Dr. Md. Anowar Shahadat	Utilization of medical investigation facilities in some selected upazila health complexes in Chandpur district
Dr. Noushad Ibna Rafique	Knowledge about factors of oral cancer among the patients attending National Institute of Cancer and Research Hospital, Dhaka

**Course: MPH (Occupational & Env. Health)**

Dr. Habibur Rahman Sarker	Health problems among the sanitary landfill site workers
Dr. Sayeeda Fateema Shahinor	Work-related health problems among tea garden workers
Dr. Md. Arifuzzaman Khan	Pattern of injuries among garment workers and their PPE practice.
Dr. Nasrin Farhana	Health problems among solid waste disposal workers in Dhaka City Corporation
Dr. Noor Nahar Shelkh	Occupational skin problems among rubber plantation workers
Dr. Farzana Khan	Musculo-skeletal problems among construction workers
Dr. Shakila Islam	Health problems among lead acid battery workers
Dr. Ejaz Bari Chowdhury	Repetitive strain injury (RSI) in computer professionals
Dr. Tahmina Ferdousy	Health problems among female hair dressers
Dr. Labony Akther	Noise-induced hearing loss among the textile workers
Dr. Mithila Faruque	Respiratory symptoms and lung function status among the cotton industry workers

Table Continued

Name of student	Topic
<b>Course: MPH (RCH)</b>	
Dr. Tabassum Tahmin Sajani Dr. Shahina Haque Dr. Marufa Khanom Dr. Nazia Chowdhury	Maternal and fetal outcome of the mothers with gestational diabetes mellitus Pregnancy complication and birth asphyxia in a tertiary-level hospital Maternal factors of LBW among neonates delivered in tertiary hospital Maternal and foetal outcome of adolescent pregnancy attended in tertiary-level hospitals
Dr. Khodoker Hasina Sultana Dr. Zeenat Raihana	Gender difference in quality of life among tuberculosis patients Determinants of autism in children attending special schools for autistic children.
Dr. Md. Meshbah-ul-Haque Dr. Md. Showkat Ali Khan	Nutritional status of <5 children with bronchial asthma Internet addiction disorder among adolescent students
Dr. Sadia Sharmin Dr. Md. Shahedul Islam	Fertility pattern of women suffering from Cervical Carcinoma. Nutritional status and depression in elderly rural women
Dr. Mohammad Ruhul Amin Dr. Afrin Ahmed Clara	Obesity and its determinants among children of English medium school Reproductive health problems and care-seeking behavior of adolescent girls
Dr. Nishat Farhana Khan Dr. Farhana Hoque Khan	Physical abuse during pregnancy Compliance to diabetic management and glycemic status in rural diabetic women
Dr. Farhana Huq Dr. Md. Parvez Iqbal Sharif	Risk factors in primary infertile women and their healthcare-seeking behavior Determinants of delay in diagnosis and treatment of kala-azar
Dr. Shafiqur Rahman Dr. Suraiya Begum	Factors associated with delay in diagnosis of TB among garment workers Skin problems among the workers employed in leather tanneries
Dr. Shahana Afroze Dr. Md. Mohesenui Momer	Urinary incontinence among female patients attending a specialized hospital Depression in rural young adults having suicidal attempts
Dr. Morsheda Tania Rashid Khan Dr. Munira Begum	Mode of delivery and fetal outcome of complicated pregnancy Women's access to reproductive health services provided through community clinic
Dr. Md. Shah Alam Mollah	Nutritional status of women of reproductive age-group suffering from arsenicosis
<b>Course: M. Phil (PSM); Session: 2009-2011</b>	
Dr. Asma Kabir	Unmet need for family planning among married women: Experience from rural and urban communities
Dr. Sheikh Faruque Elahee	Therapeutic efficacy of thuja occidentalis on common warts: A randomized control trial
Dr. Md. Tarek Mehedi Dr. Ayesha Afroz Chowdhury	Prevalence of transfusion infections among the voluntary blood donors Adherence to Antihypertensive Therapy
Dr. SMM. Saleh Bhuiyan	Seroprevalence and risk factors of hepatitis-C virus infection among professional and non-professional blood donors
Dr.(Col) A.Q.M. Shamsul Haque	Determinants and decisions of caesarian delivery in public and private hospital

### List of research work conducted by the faculties of NIPSOM (2011)

Project title	Investigators	Funding agency
Mothers' awareness on mother-to-child transmission of HIV/AIDS	PI: Dr. Md. Nazrul Islam, Asstt. Professor CI: Dr. Afroza Begum, Assoc. Professor Dr. Shaheda Hamid, Asstt. Professor Dr. Sathi Dastidar, Medical Officer Dept. RCH	DGHS
Analysis of users fee in hospitals of Bangladesh	PI: Dr. Md. Amirul Hassan, Assoc. Professor CI: Dr. Khorshed Ali Mia, Asstt. Professor Dr. Asit Baran Biswas, Asstt. Professor Dr. Md. Zahidur Rahman, Asstt. Professor Dept. of Public Health & Hospital Administration	DGHS
Knowledge and awareness about arsenicosis among people in SIDR-affected area of Bangladesh	PI: Dr. A. Wazed, Asstt. Professor Dept. of Occupational & Environmental Health CI: Dr. Asit Baran Biswas, Asstt. Prof., Dept. of Public Health & Hospital Administration	DGHS
Demand for healthcare and accessibility to health facilities: Experience from a rural community of Bangladesh	PI: Prof. Dr. Shaila Hossain, Professor CI: Dr. Md. Ziaul Islam, Assoc. Professor Dr. Mussarrat Haque, Assoc. Professor Dr. Md. Mahmudul Haque, Asstt. Professor Dr. Hasina Rabeya Bashir, Asstt. Professor Dr. Suraiya Raushan Ara, Asstt. Professor Dr. Pupul Krishna Chanda, Asstt. Professor Dept. of Community Medicine	DGHS
Disease profile and socioeconomic status of the patients attending psychiatry department in a tertiary-level hospital	PI: Dr. Kazi Jahangir Hossain, Asstt. Professor , Dept. of Health Education CI: Dr. Md. Mustafa Kamal, Asstt. Professor Dept. of Nutrition & Biochemistry Dr. Md. Rizwanul Karim, Medical Officer Dept. of Epidemiology	DGHS
Assessing risk factors of tuberculosis among prisoners	PI: Dr. Meerjady Sabrina Flora, Assoc. Professor, Dept. of Epidemiology CI: Dr. Md. Rizwanul Karim, Medical Officer Dept. of Epidemiology Dr. Abdullah Al Mamun, MPH (Epid) Student	NTB, DGHS
Effect of targeted food supplementation through NNP on pregnancy weight gain and birth weight in different chronic energy deficient group.	PI: Dr. Meerjady Sabrina Flora, Assoc. Professor, Dept. of Epidemiology CI: Dr. Md. Rizwanul Karim, Medical Officer, Dept. of Epidemiology Dr. Abdullah Al Mamun, MPH (Epid) Student	BMRC

## National Institute of Cardiovascular Disease (NICVD)

### Research Activities

NICVD has been conducting three postgraduate courses under the University of Dhaka/BSMMU. The courses are Master of Surgery (MS-Cardiovascular & Thoracic Surgery), Doctor

of Medicine (MD- Cardiology), Diploma in Cardiology ( D-Card). Each student of MS and MD final part course has to submit a thesis before final part examination to the relevant university. This work is done under the guidance of a professor of the respective departments.

The following is the list of already-done and some ongoing theses works at NICVD for the year 2011 and onwards:

## Thesis works done by MD/MS students

1. Reduction of peri-procedural myocardial injury by bolus dose of atorvastatin before PCI
2. Impact of blood glucose status at admission on clinical outcome of thrombolysed patients with ST-segment elevation in AMI
3. Study of risk factors and in-hospital outcome AMI in young adults
4. Angiographic correlation of quantitative ST segment depression in 12 lead ECG in non-ST segment elevation ACS
5. Association of hypertension on development of coronary collaterals in severe CAD
6. Angiographic severity of acute STEMI patients with or without metabolic syndrome
7. Clinical and echo evaluation of inferior MI with or without RV infarction
8. Correlation of magnitude of ST segment elevation in acute inferior MI with the proximity of RCA lesion
9. Echo evaluation of LV diastolic dysfunction after PCI
10. Angiographic status of prolonged QRS duration in patients with acute MI
11. Assessment of ventricular dyssynchrony in heart failure with normal QRS complex
12. Effect of statin therapy in ventricular arrhythmia in patients with acute anterior MI
13. Effect of PTMC on pulmonary function
14. Coronary angiographic correlation with troponin I level in acute STEMI
15. Impact of blood glucose level on contrast-induced nephropathy after PCI in patients not known to be diabetic with ACS
16. Increased arterial stiffness correlates with the severity of coronary artery disease
17. In-hospital outcome of compromised small side branch after percutaneous coronary intervention
18. Risk factor profile of pre-menopausal woman with acute coronary syndrome
19. Correlation between elevated B type natriuretic peptide levels with extent of coronary artery disease in patient with unstable angina
20. Comparison of in-hospital outcome between transradial and transfemoral PCI
21. Correlation of cardiac troponin I with left ventricular systolic function in a patient with acute ST-segment elevated myocardial infarction
22. Aortic pulse wave velocity correlates with the severity of coronary artery disease in patient with STEMI
23. Association of atherosclerotic renal artery stenosis with coronary artery disease
24. Association of severity of CAD with mitral annular calcification under 65 years of age
25. Association of left atrial volume index and in-hospital outcome in patients with anterior myocardial infarction
26. Association of hyperglycemia with angiographic severity of coronary artery disease in patients with acute coronary syndrome
27. Effect of tranexamic acid on post-operative bleeding following myocardial revascularization (CABG) using cardiopulmonary bypass
28. Early outcome of OPCAB in patient with multi-vessel disease
29. Effect of peri-operative oral sildenafil on pulmonary hypertension after congenital heart surgery
30. In-hospital outcome after primary total correction of tetralogy of fallot in different age-groups
31. Early outcome of prolonged cardiopulmonary bypass time on renal function in patient of open heart surgery at NICVD, Dhaka
32. Early outcome of CABG surgery in patients with pre-operative elevated level of HbA1c with undiagnosed DM
33. Early outcome of OPCAB in patients with multi-vessel disease with or without prior myocardial infarction
34. Pre-operative high-sensitive C-reactive protein level predicts early outcome after coronary artery bypass graft surgery
35. Evaluation of pulmonary function between off-pump and on-pump CABG surgery
36. Evaluation of myocardial preservation following ante-grade and retrograde cardioplegia in AVR
37. Early outcome of mitral valve replacement in patients having mitral stenosis with severe pulmonary hypertension
38. Early outcome of peri-operative hyperglycemia in patients undergoing CABG with or without DM

39. Immediate post-operative outcome in double valve replacement patients with or without preservation of mitral subvalvular structures
40. Atorvastatin pre-treatment diminishes the myocardial ischemic markers early after CABG operation
41. Early outcome of VSD with pulmonary hypertension.

## List of icddr,b publications on maternal and child health for 2011

### Original papers including review articles and short reports, in journals

1. Alam DS, Yunus M, Arifeen SE, Chowdury HR, Larson CP, Sack DA, Baqui AH, Black RE. Zinc treatment for 5 or 10 days is equally efficacious in preventing diarrhea in the subsequent 3 months among Bangladeshi children. *J Nutr* 2011 Feb;141(2):312-5.
2. Baqui AH, Choi Y, Williams EK, Arifeen SE, Mannan I, Darmstadt GL, Black RE. Levels, timing, and etiology of stillbirths in Sylhet district of Bangladesh. *BMC Pregnancy Childbirth*. 2011 Apr 1;11:25.
3. Borse NN, Hyder AA, Bishai D, Baker T, Arifeen SE. Potential risk estimation drowning index for children (predic): a pilot study from Matlab, Bangladesh. *Accid Anal Prev* 2011 Nov;43(6):1901-6.
4. Borse NN, Hyder AA, Streatfield PK, Arifeen SE, Bishai D. Childhood drowning and traditional rescue measures: case study from Matlab, Bangladesh. *Arch Dis Child* 2011 Jul;96(7):675-80
5. Canning D, Razzaque A, Driessen J, Walker DG, Streatfield PK, Yunus M. The effect of maternal tetanus immunization on children's schooling attainment in Matlab, Bangladesh: follow-up of a randomized trial. *Soc Sci Med* 2011 May;72(9):1429-36
6. Catto AG, Zgaga L, Theodoratou E, Huda T, Nair H, El Arifeen S, Rudan I, Duke T, Campbell H. An evaluation of oxygen systems for treatment of childhood pneumonia. *BMC Public Health*. 2011 Apr 13;11 Suppl 3:S28.
7. Choudhuri D, Huda T, Theodoratou E, Nair H, Zgaga L, Falconer R, Luksic I, Johnson HL, Zhang JS, El Arifeen S, Nelson CB, Borrow R, Campbell H, Rudan I. An evaluation of emerging vaccines for childhood meningococcal disease. *BMC Public Health*. 2011 Apr 13;11 Suppl 3:S29.
8. Choudhury N, Ahmed SM. Maternal care practices among the ultra poor households in rural Bangladesh: a qualitative exploratory study. *BMC Pregnancy Childbirth* 2011 Mar 1;11(1):15
9. Darmstadt GL, Baqui AH, Choi Y, Bari S, Rahman SM, Mannan I, Ahmed ASMNU, Saha SK, Seraji HR, Rahman R, Winch PJ, Chang S, Begum N, Black RE, Santosham M, Arifeen SE; for the Bangladesh Projahnmo-2 (Mirzapur) Study. Validation of a clinical algorithm to identify neonates with severe illness during routine household visits in rural Bangladesh. *Arch Dis Child* 2011 Dec; 96(12): 1140-6.
10. Doi M, Rekha RS, Ahmed S, Okada M, Kumar Roy A, Arifeen SE, Ekström EC, Raqib R, Wagatsuma Y. Association between calcium in cord blood and newborn size in Bangladesh. *Br J Nutr* 2011 Nov;106(9):1398-407
11. Dynes M, Rahman A, Beck D, Moran A, Rahman A, Pervin J, Yunus M, Rashid MH, Gazi T, Kanti Biswas K, Buffington S, Patterson JM, Sibley L. Home-based life saving skills in Matlab, Bangladesh: a process evaluation of a community-based maternal child health programme. *Midwifery* 2011 Feb;27(1):15-22.
12. Eneroth H, Persson LÅ, Arifeen SE, Ekström EC. Infant anaemia is associated with infection, low birthweight and iron deficiency in rural Bangladesh. *Acta Paediatr* 2011 Feb;100(2):220-5
13. Gazi R, Hossain SS, Zaman K, Koehlmoos TP. Community mobilization for safe motherhood. *Cochrane Database Syst Rev* 2011; 4: CD009091. (Review paper)
14. Gidudu J, Sack DA, Pina M, Hudson MJ, Kohl KS, Bishop P, Chatterjee A, Chiappini E, Compingbutra A, da Costa C, Fernandopulle R, Fischer TK, Haber P, Masana W, de Menezes MR, Kang G, Khuri-Bulos N, Killion LA, Nair C, Poerschke G, Rath B, Salazar-Lindo E, Setse R, Wenger P, Wong VC, Zaman K. Diarrhea: case definition and guidelines for collection, analysis, and presentation of immunization safety data, Vaccine. 2011 Jan 29;29(5):1053-71
15. Hamadani JD, Tofail F, Nermell B, Gardner R, Shiraji S, Bottai M, Arifeen SE, Huda SN, Vahter M. Critical windows of exposure for arsenic-associated impairment of cognitive function in pre-school girls and boys: a population-based cohort study. *Int J Epidemiol* 2011 Dec;40(6):1593-1604

16. Henkle E, Steinhoff MC, Omer SB, Roy E, Arifeen SE, Raqib R, McNeal M, Breiman RF, Moss WJ, Zaman K. Incidence of influenza virus infection in early infancy: a prospective study in South Asia, *Pediatr Infect Dis J*. 2011 Feb;30(2):170-3
  17. Higginson D, Theodoratou E, Nair H, Huda T, Zgaga L, Jadhav SS, Omer SB, Rudan I, Campbell H. An evaluation of respiratory administration of measles vaccine for prevention of acute lower respiratory infections in children. *BMC Public Health* 2011 Apr 13;11(Suppl 3):S31
  18. Hossain MB, Kelleher SL, Lönnerdal B. Maternal iron and zinc supplementation during pregnancy affects body weight and iron status in rat pups at weaning. *J Nutr* 2011 May;141(5):798-804
  19. Huda T, Nair H, Theodoratou E, Zgaga L, Fattom A, El Arifeen S, Rubens C, Campbell H, Rudan I. An evaluation of the emerging vaccines and immunotherapy against staphylococcal pneumonia in children. *BMC Public Health*. 2011 Apr 13;11 Suppl 3:S27.
  20. Khan AI, Kabir I, Ekstrom E-C, Asling-Monemi K, Alam DS, Frongillo EA, Yunus M, Arifeen S, Persson L-A. Effects of prenatal food and micronutrient supplementation on child growth from birth to 54 months of age: a randomized trial in Bangladesh. *J Nutr* 2011;10:134
  21. Lindström E, Hossain MB, Lönnerdal B, Raqib R, Arifeen SE, Ekström EC. Prevalence of anemia and micronutrient deficiencies in early pregnancy in rural Bangladesh, the MINIMat trial. *Acta Obstet Gynecol Scand* 2011 Jan;90(1):47-56
  22. Luby SP, Halder AK, Huda TMN, Unicomb L, Johnston RB. Using child health outcomes to identify effective measures of handwashing. *Am J Trop Med Hyg* 2011 Nov; 85(11):882-92.
  23. Mannan I, Choi Y, Coutinho AJ, Chowdhury AI, Rahman SM, Seraji HR, Bari S, Shah R, Winch PJ, Arifeen SE, Darmstadt GL, Baqui AH. Vulnerability of newborns to environmental factors: findings from community based surveillance data in Bangladesh. *Int J Environ Res Public Health* 2011 Aug;8(8):3437-52.
  24. Nair H, Verma VR, Theodoratou E, Zgaga L, Huda T, Simões EAF, Wright PE, Rudan I, Campbell H. An evaluation of the emerging interventions against Respiratory Syncytial Virus (RSV)-associated acute lower respiratory infections in children. *BMC Public Health* 2011 Apr 13; 11(Suppl 3):S30
  25. Powell-Jackson T, Hoque ME. Economic consequences of maternal illness in rural Bangladesh. *Health Econ* 2011 May 9.
  26. Rahman A, Moran A, Pervin J, Rahman A, Rahman M, Yeasmin S, Begum H, Rashid H, Yunus M, Hruschka D, Arifeen SE, Streatfield PK, Sibley L, Bhuiya A, Koblinsky M. Effectiveness of an integrated approach to reduce perinatal mortality: recent experiences from Matlab, Bangladesh. *BMC Public Health* 2011;11:914
  27. Rahman KM, Arifeen SE, Zaman K, Rahman M, Raqib R, Yunus M, Begum N, Islam MS, Sohel BM, Rahman M, Venkatesan M, Hale TL, Isenbarger DW, Sansonetti PJ, Black RE, Baqui AH. Safety, dose, immunogenicity, and transmissibility of an oral live attenuated *Shigella flexneri* 2a vaccine candidate (SC602) among healthy adults and school children in Matlab, Bangladesh. *Vaccine*. 2011 Feb 1;29(6):1347-54
  28. Roy E, Hasan KZ, Haque R, Haque AKMF, Siddique AK, Sack RB. Patterns and risk factors for helminthiasis in rural children aged under 2 in Bangladesh. *S Afr J Child Health* 2011 Sep;5(3):78-84
  29. Saha S, Darmstadt G, Naheed A, Arifeen S, Islam M, Fatima K, Breiman R, Sack D, Hamer D. Improving the sensitivity of blood culture for *Streptococcus pneumoniae*. *J Trop Pediatr* 2011 Jun;57(3):192-6.
  30. Sinclair D, Abba K, Zaman K, Qadri F, Graves PM. Oral vaccines for preventing cholera, *Cochrane Database Syst Rev*. 2011 Mar 16;3:CD008603.
  31. Webster J, Theodoratou E, Nair H, Seong AC, Zgaga L, Huda T, Johnson HL, Madhi S, Rubens C, Zhang JSF, Arifeen SE, Krause R, Jacobs TA, Brooks AW, Campbell H, Rudan I. An evaluation of emerging vaccines for childhood pneumococcal pneumonia. *BMC Public Health* 2011 Apr 13;11(Suppl 3):S26
- Letters, Editorials, Abstracts, etc. in Journals**
1. Ahmed A, Haque NA, Hua NL, Reichenbach L, Hossain M, Uddin J, Quaiyum A. Community support groups: expectant contributors in improving maternal health in Bangladesh (abstract). *Trop Med Int Health* 2011 Oct;16(Suppl 1):291
  2. Ahmed A, Hossain SAS, Quaiyum A, Reichenbach L, Mamun AA, Huq NL. Husband's knowledge on maternal health care in rural Bangladesh: an untapped resource? (abstract). *Trop Med Int Health* 2011 Oct;16(Suppl 1):291



3. Ali NA, Khan J, Taleb F, Henry M, Khan S, Bernson J, Schoemaker J, Hoque DE, Arifeen SE, Steele M. Point-of-care diagnostics at the periphery: early findings from an exploratory study in Bangladesh (abstract). *Trop Med Int Health* 2011 Oct;16(Suppl 1):297
4. Bilkis S, Khan R, Sultana M, Streatfield PK, Nahar Q, Blum LS. Perceptions and care seeking for obstructed labor: findings from the qualitative assessment of the Bangladesh maternal mortality survey 2010 (abstract). *Trop Med Int Health* 2011 Oct;16(Suppl 1):296-7
5. Blum L, Khan R, Bilkis S, Sultana M, Nahar Q, Streatfield P. Childbirth planning and preparation: findings from the qualitative assessment of the Bangladesh maternal mortality survey (BMMS), 2010 (abstract). *Trop Med Int Health* 2011 Oct;16(Suppl 1):300
6. Doi M, Rekha RS, Ahmed S, Okada M, Roy AK, Arifeen SE, Ekström E-C, Raqib R, Wagatsuma Y. Calcium in breast milk is associated with the underweight of infant at around 6 months age in a cohort of Bangladesh (abstract). *J Epidemiol Community Health* 2011 Aug;65 (Suppl 1):A329-30
7. Frith AL, Frongillo EA, Naved RT, Byrne M. Maternal breastfeeding beliefs, appraisals, practices, and food insecurity influence quality of breastfeeding interaction in Bangladesh (abstract). *FASEB J* 2011 Apr;25(4 Suppl):592.22.
8. Haque N, Huq N, Ahmed A, Uddin J, Quaiyum A. NGO CSBAs: a big step in public-private partnership (PPP) in improving mother and child health in rural Bangladesh (abstract). *Trop Med Int Health* 2011 Oct;16(Suppl 1):290
9. Haque NA, Huq N, Ahmed A, Uddin J, Quaiyum A. Overcoming the challenges in inequity to improve maternal and neonatal health in rural Bangladesh (abstract). *Trop Med Int Health* 2011 Oct;16(Suppl 1):293
10. Hoque S, Iqbal M, Hanifi SMA, Moula A, Bhuiya A. Sustaining community midwives for quality maternal services: an experience from a project in a rural area of Bangladesh (abstract). *Trop Med Int Health* 2011 Oct;16 (Suppl 1):347
11. Hossain HMD, Noguchi E, Arifeen SE, Raqib R, Persson LA, Wagatsuma Y. Association between allergic diseases and nutritional status among children in Bangladesh (abstract). *J Epidemiol Community Health* 2011 Aug;65(Suppl 1):A386.
12. Hossain SAS, Azmi AJ, Quaiyum A, Ahmed A, Haque N, Huq NL. Mobile phone network to access specialist care at community level in maternal emergencies (abstract). *Trop Med Int Health* 2011 Oct;16(Suppl 1):292
13. Huq N, Koehlmoos T, Azmi AJ, Quaiyum MA, Hossain AMS. Use of mobile phone: communication barriers in maternal and neonatal emergencies in rural Bangladesh (abstract). *Trop Med Int Health* 2011 Oct;16(Suppl 1):339
14. Khan R, Blum L, Sultana M, Bilkis S, Nahar Q, Streatfield PK. Why some women die and others survive maternal complications: findings from the qualitative assessment of Bangladesh maternal mortality survey (BMMS), 2010 (abstract). *Trop Med Int Health* 2011 Oct;16(Suppl 1):290
15. Lindstrom E, Basu S, Persson L-A, Raqib R, Arifeen SE, Ekstrom E-C. Associations between Oxidative Stress in Pregnancy and Birth Anthropometry in a Cohort of Women and Children in Rural Bangladesh, the MINIMat-Trial. *J Dev Orig Health Dis* 2011 Sep;2(Suppl 1):S74
16. Persson L-A, Arifeen S, Khan AI, Kabir I, Lindstrom E, Ekstrom EC. Effects of prenatal food and multiple micronutrient supplementation on mortality and risk indicators of metabolic syndrome at 5 years of age (abstract). The MINIMat trial in rural Bangladesh. *J Dev Orig Health Dis* 2011 Sep;2(Suppl 1):S30
17. Roth DE, Al-Mahmud A, Arifeen SE, Raqib R, Black RE, Baqui AH. Randomized open-label trial of two weekly oral vitamin D3 supplementation regimens during the third trimester of pregnancy in Bangladeshi women: effects on maternal vitamin D status and safety (abstract). *FASEB J* 2011 Apr;25(4 Suppl):236.6.
18. Roth DE, Al-Mahmud A, Kimlin M, Arifeen SE, Raqib R, Black RE, Baqui AH. Seasonal variations in vitamin D status in Bangladesh: a preliminary look at the potential role of aerosol pollution (abstract). *FASEB J* 2011 Apr;25(4 Suppl):996.19.
19. Sarker B, Mridha M, Banu M, Alam B. The reasons for use and non-use of urban maternal and child health services in Bangladesh: a qualitative assessment from the client's perspective (abstract). *Trop Med Int Health* 2011 Oct;16(Suppl 1):291
20. Shapiro M, Murray-Kolb L, Chang S, Hamadani J, Arifeen SE, Baqui A, Black R. Maternal depressive symptoms and infant diarrhea in

Bangladesh (abstract). *FASEB J* 2011 Apr;25(4 Suppl):780.11.

#### Abstracts in conference proceedings

1. Ahmed A, Haque NA, Chowdhury ME, Huq NL, Dasgupta SK, Hossain M, Jamaluddin M, Quaiyum MA. Improving maternal health through community-based intervention in Bangladesh (abstract). *In: Cravioto A, Evans TG, Bhuiya A, Khan MSI, Rahim MA, Judd G, editors. Science to accelerate universal health coverage: abstracts book [of the] 13th Annual Scientific Conference (ASCON XIII), 14-17 March 2011. Dhaka: International Centre for Diarrheal Disease Research, Bangladesh, 2011:39*
2. Aziz SMM, Ahmed A, Quaiyum MA, Huq NL. Role of local government and community groups to improving maternal and neonatal health in rural Bangladesh (abstract). *In: Cravioto A, Evans TG, Bhuiya A, Khan MSI, Rahim MA, Judd G, editors. Science to accelerate universal health coverage: abstracts book [of the] 13th Annual Scientific Conference (ASCON XIII), 14-17 March 2011. Dhaka: International Centre for Diarrheal Disease Research, Bangladesh, 2011:295*
3. Chowdhury ME, Ahmed S. Contextual influence on the use of maternal healthcare services in rural Bangladesh: a multilevel analysis (abstract). *In: Cravioto A, Evans TG, Bhuiya A, Khan MSI, Rahim MA, Judd G, editors. Science to accelerate universal health coverage: abstracts book [of the] 13th Annual Scientific Conference (ASCON XIII), 14-17 March 2011. Dhaka: International Centre for Diarrheal Disease Research, Bangladesh, 2011:58*
4. Ferdous J, Ahmed A, DasGupta SK, Huda F, Koblinsky M, Chowdhury ME. A validation study of maternal self-reports of postpartum morbidities: implications for health programmes (abstract). *In: Cravioto A, Evans TG, Bhuiya A, Khan MSI, Rahim MA, Judd G, editors. Science to accelerate universal health coverage: abstracts book [of the] 13th Annual Scientific Conference (ASCON XIII), 14-17 March 2011. Dhaka: International Centre for Diarrheal Disease Research, Bangladesh, 2011:179*
5. Hamadani JD, Tofail D, Grantham-McGregor SM, Gardner R, Nermell B, Huda SN, Shiraji S, Bottai M, Arifeen SE, Vahter M. Critical windows of exposure for arsenic-associated impairment of cognitive function in preschool children: a population-based longitudinal study in rural Bangladesh (abstract). *In: Cravioto A, Evans TG, Bhuiya A, Khan MSI, Rahim MA, Judd G, editors. Science to accelerate universal health coverage: abstracts book [of the] 13th Annual Scientific Conference (ASCON XIII), 14-17 March 2011. Dhaka: International Centre for Diarrheal Disease Research, Bangladesh, 2011:312*
6. Hoque DME, Salam SS, Rahman M, Tenbroek N, Rema H, Karim R, Savic M, Talens AT, Arifeen SE. Achieving universal coverage of maternal, newborn and child health through building public-private partnerships in a high-mortality district: findings from a baseline survey in Netrakona, Bangladesh (abstract). *In: Cravioto A, Evans TG, Bhuiya A, Khan MSI, Rahim MA, Judd G, editors. Science to accelerate universal health coverage: abstracts book [of the] 13th Annual Scientific Conference (ASCON XIII), 14-17 March 2011. Dhaka: International Centre for Diarrheal Disease Research, Bangladesh, 2011:41*
7. Hoque ME, Powell-Jackson T, Gupta SKD, Chowdhury ME, Koblinsky M. Coping with costs of maternal healthcare in rural Bangladesh (abstract). *In: Cravioto A, Evans TG, Bhuiya A, Khan MSI, Rahim MA, Judd G, editors. Science to accelerate universal health coverage: abstracts book [of the] 13th Annual Scientific Conference (ASCON XIII), 14-17 March 2011. Dhaka: International Centre for Diarrheal Disease Research, Bangladesh, 2011:12*
8. Mahmud-Uz-Zaman, Hoq DME, Rahman M, Ali NA, Arifeen SE. Role of village doctors in the management of childhood illnesses: findings from a descriptive study in Matlab, Bangladesh (abstract). *In: Cravioto A, Evans TG, Bhuiya A, Khan MSI, Rahim MA, Judd G, editors. Science to accelerate universal health coverage: abstracts book [of the] 13th Annual Scientific Conference (ASCON XIII), 14-17 March 2011. Dhaka: International Centre for Diarrheal Disease Research, Bangladesh, 2011:303*
9. Sarker BK, Motin A, Mridha MK. Effect of cyclone on maternal healthcare in Bangladesh: a rapid assessment (abstract). *In: Cravioto A, Evans TG, Bhuiya A, Khan MSI, Rahim MA, Judd G, editors. Science to accelerate universal health coverage: abstracts book [of the] 13th Annual Scientific Conference (ASCON XIII), 14-17 March 2011. Dhaka: International Centre for Diarrheal Disease Research, Bangladesh, 2011:189*

10. Sarker BK, Mridha MK. Inequity in the use of maternal health services in Bangladesh: a barrier to achieving Millennium Development Goal 5 (abstract). *In: Cravioto A, Evans TG, Bhuiya A, Khan MSI, Rahim MA, Judd G, editors. Science to accelerate universal health coverage: abstracts book [of the] 13th Annual Scientific Conference (ASCON XIII), 14-17 March 2011. Dhaka: International Centre for Diarrheal Disease Research, Bangladesh, 2011:85*
11. Tofail F, Kippler M, Hamadani JD, McGregor S, Vahter M. Association of maternal cadmium exposure during pregnancy with development in early childhood (abstract). *In: Cravioto A, Evans TG, Bhuiya A, Khan MSI, Rahim MA, Judd G, editors. Science to accelerate universal health coverage: abstracts book [of the] 13th Annual Scientific Conference (ASCON XIII), 14-17 March 2011. Dhaka: International Centre for Diarrheal Disease Research, Bangladesh, 2011:314*
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14. Zaman K, Yunus M, Arifeen SE, Luby S, Rahman M, Azim T, Faruque ASG, Huq E, Hossain I, Khan AE, Sack DA, Victor JC, Lewis K, Fleming J, Steele AD, Neuzil K, Cravioto A. Universal rotavirus vaccine introduction in Bangladesh could accelerate achievement of Millennium Development Goal 4 (abstract). *In: Cravioto A, Evans TG, Bhuiya A, Khan MSI, Rahim MA, Judd G, editors. Science to accelerate universal health coverage: abstracts book [of the] 13th*

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## Institute of Child and Mother Health (ICMH)

### Research work in 2011

1. Baseline survey on some selected health parameters in the catchments areas of the Institute of Child and Mother Health (ICMH)
2. Improving quality and reproductive healthcare in the facility through implementation and standard guidelines
3. Iron parameters and iron-deficiency anemia in pregnant women
4. Birthweight and neonate in obsess pregnant women
5. Admission cardiotocography screening of high-risk obstetric patients for neonatal outcome.
6. Clinical profile and immediate hospital outcome of neonatal hyperbilirubinemia—A hospital-based study
7. Detection of human boca virus in CSF of children with encephalitis
8. Risk factors of perinatal asphyxia
9. Serum electrolyte and renal function status in neonates having perinatal asphyxia
10. Risk factor of neonatal septicemia in a tertiary hospital in Bangladesh
11. Safety and efficacy of simplified antibiotic regimens for outpatient treatment of suspected sepsis in neonates and young infants in Bangladesh
12. Serum electrolyte and renal function status in perinatal asphyxia at ICMH-admitted neonates
13. Comparison between Wellcome and WHO classification in recognizing protein-energy malnutrition (PEM) among under-5 children.
14. Association of bacterial vaginosis with premature labour
15. Subclinical hypothyroidism in subfertile women
16. Serum uric acid level in relation to severity of preeclampsia.

17. Early post-operative feeding versus conventional feeding for patients undergoing caesarean section-A RCT
18. Assessment of serum iron profile in preeclamptic and normotensive women in third trimester of pregnancy
19. Metformin and clomiphene citrate as first-line treatment for ovulation induction and pregnancy achievement in subfertile women with polycystic ovary syndrome-ARCT
20. Randomized controlled trial of two regimens of loading dose of magnesium sulfate in eclampsia
21. Risk factors of perinatal asphyxia-A case-control study.

## James P. Grant School of Public Health, BRAC University

### Research activities during 2006-2012

Title	Investigators	Partners	Funding	Period
Building and Strengthening the Technical and Institutional Capacities of Government, NGOs, and Implementing Partners (GF 913 Package)	Dr. Timothy Evans, Ismat Bhuiya, Asiful Halder Choudhury, Maliha Bassam, Gayatri Choudhury, and J.N. Zahiduzzaman.	Partners: JPGSPH, BRAC University (As lead agency) Population Council NIPSOM PIAC Bangladesh, and CWFD	The Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM)	2008 to 2012
Food Security Nutritional Surveillance Project	Dr. Timothy Evans, Dr. Mohammad Akram Hussain, Dr. Enamul Hasib	Helen Keller International and Bangladesh Bureau of Statistics.	European Union Delegation to Bangladesh	June 2008 to May 2014
MOVE-IT Bangladesh	Dr. Timothy Evans, Dr. Malabika Sarkar, Aleya Pradhan.		Health Metrics Network	May 2011 to June 2012
WHO's Human Resources for Health Policy Impact Assessment Tool (PIAT)	Dr. Timothy Evans, Dr. Nasima Selim, Md. Nuruzzaman, Mahmudul Bappi		WHO	December 2011 to March 2012
Partnership to review of UNICEF'S Urban Health and Development Programmes in Bangladesh	Prea Gulati, Tahrim Chowdhury, Shazad Ahmed		UNICEF	01 December 2011 to 31 March 2012
The Role of Drug-sellers in the Informal Medical Markets: an Exploratory Study for Effective Interventions	Dr. Sabina Faiz Rashid and Md Tanvir Hasan	icddr,b	The study received financial support from Results for development Institute, Inc.	2011 to 2012
Review of Maternal, Neonatal and Child Health Projects	Led by Dr. Malabika Sarkar; this project brings together a team of researchers and experts from JPGSPH, AMDD (Columbia University), and icddr,b		UNICEF	December 2011 to August 2012

**Table Continued**

Title	Investigators	Partners	Funding	Period
GFATM-TB Role of Healthcare Providers in Slums— Partnerships, Referral and Linkages	Dr. Sabina F. Rashid, Ismat Bhuiya, Dr. Enamul Hasib, Asiful Haider Chowdhury, Akram Hussain, Md. Tareq-ul-Hassan, and Maliha Bassam	BRAC Health	GFATM through BRAC	January 2012 to June 2012
Health Professional Education— Situational Analysis	Dr. Timothy Evans, Dr. Nasima Selim, Md. Nuruzzaman, Dr. Kawkab Mahmud, Iffat Nawrin Tully, Sharmin Hena, Mahmudul Haque, and Tarek	The Directorate General of Health Services and Health Manpower Development, Ministry of Health and Family Welfare and RTM International, a local NGO as part of the Bangladesh country team of a 5 Country Regional Network	Rockefeller Foundation	January 2012 to September 2012
Updating Frequently Asked Questions Databank on Adolescent Sexual and Reproductive Health in Bangladesh	Dr. Quamrun Nahar (icddr,b), Ismat Bhuiya, Asiful Haider Chowdhury, Fariha Haseen (icddr,b)	icddr,b	USAID	April 2012 to March 2013
Governance for Urban Health Equity: Mobilizing Demand for Primary Healthcare among the Urban Poor in Bangladesh	Dr. Sabina F. Rashid, Dr. Alayne Adams, and Anuradha Hashemi		The International Development Research Centre	May 01, 2012 to 2015
Exploring the Role of Community in Preventing Early Marriage and Early Childbearing: An Exploratory Study	Dr. Quamrun Nahar (icddr,b), Ismat Bhuiya, Asiful Haider Chowdhury, Maliha Bassam		USAID	June 2012 to May 2013