

Dr. Sayem Ahmed

Research Associate - Health Economist
Health Economics and Health Technology Assessment (HEHTA),
Institute of Health and Wellbeing, University of Glasgow
1 Lilybank Gardens, Glasgow, G12 8RZ
email: sayem.ahmed@glasgow.ac.uk
sayem72936@yahoo.com

WEBSITES AND RESEARCH PROFILE

Website: <https://www.gla.ac.uk/researchinstitutes/healthwellbeing/staff/sayemahmed/>

ORCID ID: [0000-0001-9499-1500](https://orcid.org/0000-0001-9499-1500)

Google Scholar profile: <https://scholar.google.co.uk/citations?user=Zp4cQbMAAAAJ&hl=en>

Researchgate profile: https://www.researchgate.net/profile/Sayem_Ahmed

RESEARCH INTERESTS

- 1) Health and economic burden assessment
- 2) Cost-effectiveness analysis
- 3) Financing healthcare
- 4) Equity in health and healthcare
- 5) Economics of non-communicable diseases
- 6) Health economic modelling

EDUCATION

Doctor of Philosophy

Year: 2020

Subject area: Health Economics

Thesis title: Healthcare financing challenges and opportunities to achieving universal health coverage in the low- and middle-income country context

Institute: Karolinska Institutet, Department of Learning, Informatics, Management and Ethics (LIME), Stockholm, Sweden,

Main supervisor: Dr. Jahangir A.M. Khan

Co-supervisors: Prof. Clas Rehnberg and Prof. Louis W. Niessen

Master of Sciences (MSc)

Year: 2008

Subject area: Statistics

Institute: Department of Statistics Biostatistics & Informatics

University of Dhaka, Bangladesh

Master of Health Economics (MHE)

Year: 2007

Subject area: Health Economics

Institute: Institute of Health Economics,

University of Dhaka, Bangladesh

Bachelor of Sciences (BSc Honors)

Year: 2006

Subject area: Statistics

Institute: Department of Statistics

University of Dhaka, Bangladesh

EMPLOYMENT

Current position

Research Associate - Health Economist (December 1, 2021, to continuing)

Organization: Health Economics and Health Technology Assessment (HEHTA),

Institute of Health and Wellbeing, University of Glasgow

Address: 1 Lilybank Gardens, Glasgow, G12 8RZ

Major responsibilities

- Working on 3 research projects including economic evaluations alongside clinical trials at HEHTA
- Supervising MSc and PhD students at HEHTA and University of Gothenburg
- Conducting health economics module for MSc program at HEHTA
- Disseminate research findings within HEHTA and academic conferences
- Scientific publication from health economics studies

Supervisor: Kathleen A Boyd, Reader at HEHTA, University of Glasgow

Previous positions

Health Economist (December 1, 2020, to November 30, 2021)

Organization: Centre for Tropical Medicine and Global Health, Nuffield Department of Medicine, University of Oxford, Henry Wellcome Building for Molecular Physiology, Old Road Campus, Headington, Oxford OX3 7BN

Based at: Mathematical Modelling Group,
Oxford University of Clinical Research (OUCRU),
764 Vo Van Kiet Street, Ward 1, District 5,
Ho Chi Minh City, Vietnam

Major responsibilities

- I led the health economics team of Oxford University of Clinical Research Unit (OUCRU), a large-scale clinical and public health research unit based in Vietnam with considerable support from the Wellcome Trust.
- Contributed to capacity development of the local staff members in health economics research
- Supervised PhD student, research staff and interns
- My research dealt with health economics research studies, including intervention costing, cost of illness analysis, cost-effectiveness analysis and evaluation of health financing systems of Vietnam and other low- and middle-income countries.
- Added economic evaluation study in different clinical trials of Oxford University of Clinical Research Unit targeting infectious disease including HIV AIDS, hepatitis, dengue, Tuberculosis and malaria

Supervisor: Dr Marc Choisy, Head, Mathematical Modelling Group at OUCRU

Research Assistant (Health Economist) (October 1, 2018, to 30 Nov 2020)

Organization: Liverpool School of Tropical Medicine, Department: Centre for Snakebite Research & Interventions, Department of Tropical Biology, Pembroke Place, Liverpool, L3 5QA UK, United Kingdom.

Major responsibilities

- I was responsible for conducting the health economics component of NIHR funded African Snakebite Research Group. I contributed to study design, data-capture tools development, and training of the local country teams (Kenya and Nigeria) on the study methodology including cost-analysis and financial protection.
- I visited the survey sites in Kenya and Nigeria regularly to monitor study activities and take measures to ensure the data quality, data management and analysis, disseminate the study findings to the policy level and publish them in scientific journals
- Contribute to designing teaching sessions and prepared materials on health economics for two masters programmes namely, Key themes in international health and health policy (TROP937) and Topics in global health (LIFE236)
- I was involved in student assessment and supervision of students for their thesis work
- Develop research concept notes for competitive grant application

Supervisor: Prof. Robert Harrison, Head, Centre for Snakebite Research & Interventions, Liverpool School of Tropical Medicine

Assistant Scientist (January 1, 2017 – September 30, 2018)

Organization: Health Economics and Financing Research Group, Health Systems and Population Studies Division (HSPSD), International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b)
68 Shaheed Tajuddin Ahmed Avenue, Dhaka 1212, Bangladesh

Major responsibilities

- Scientific proposal development
- Research project management
- Scientific analysis, and knowledge creation
- Scientific capacity building/training
- Disseminate study findings and translating research into policy
- Conduct sessions for health economics module of masters of public health programme at James P Grant School of Public Health, BRAC university
- Student assessment and supervision for their thesis work

Supervisor: Dr. Ziaul Islam, Head, Health Economics and Financing Research Group, icddr,b

Research Associate (Research Investigator) (January 1, 2013 - December 31, 2016)

Organization Health Economics and Financing Research Group, Health Systems and Population Studies Division, International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b)

Major responsibilities

Grant application writing, research project management, scientific analysis, dissemination, manuscript writing and conduct training.

Research Fellow (Research Officer) (March 24, 2011 - December 31, 2012)
Organization: Health Economics & Financing Research Group, Centre for Equity & Health Systems, International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b).

Major responsibilities: Study design, data analysis, scientific report writing

Teaching position

Adjunct Lecturer (part-time faculty position)
Duration: February 16, 2016 – October 01, 2018
School of Public Health, Independent University Bangladesh (IUB)

Major responsibilities:

- Leading health economics and management course
- Collaborate with other colleagues for designing the course including planning group sessions
- Conduct lecture sessions
- Student assessment

Consultancies

Consultant: Health Financing Expert (September 1, 2019 - December 31, 2019)
Organization: World Health Organization- country office for Bangladesh
1/A, Road # 8, Gulshan-1, Dhaka-1212, Bangladesh
Major Responsibilities: Secondary data acquisition from national sources, data analysis/ Benefit Incidence Analysis (BIA), report preparation and dissemination

Consultant (October 26, 2017 - December 15, 2017)
Organization: World Health Organization
Avenue Appia 20, Geneva 1211, Switzerland
Responsibility: Conduct joint analysis of service coverage and financial protection indicators of UHC of WHO member countries and assist in preparing Global Tracking Universal Health Coverage report

Consultant- Health Financing Expert (March 10, 2016 - May 31, 2016)
Organization: World Health Organization- country office for Bangladesh
Major Responsibilities: Estimating the trends in healthcare financial risk protection indicators in Bangladesh using Household Income Expenditure Survey (HIES), 2000-2010

Consultant: Data Analyst and Health Financing Expert (March 25, 2015 - June 30, 2015)
Organization: The World Bank- country office for Bangladesh
Plot E, 32 Syed Mahbub Morshed Avenue, Dhaka 1207, Bangladesh
Major Responsibilities: Provide support to the 'Health, Nutrition and Population

team' in the analysis of fiscal space for Health in Bangladesh
Achievements: Co-authored a World Bank report

Professional affiliations:

Honorary Research Associate (Dec 1, 2020 – Continuing)

The Centre for Snakebite Research & Interventions
Department of Tropical Disease Biology
Liverpool School of Tropical Medicine
Liverpool, UK

WHO Roster of consultants on financial protection (Jan 30, 2019 – Continuing)

The UHC financial protection monitoring team
Health Systems Governance and Financing
WHO Headquarter, Geneva, Switzerland

Collaborator (Jan 1, 2016 – Continuing)

Global Burden of Disease (GBD) Collaborative Network
Institute for Health Metrics and Evaluation, University of Washington
Washington, USA

Member of Bangladesh National Health Accounts Team (Dec 4, 2012 – Dec 31, 2015)

Health Economics Unit (HEU)
Ministry of Health & Family Welfare (MoHFW)
Government of the People's Republic of Bangladesh
Dhaka, Bangladesh

PUBLICATION IN PEER-REVIEWED JOURNALS

Summary

- Number of total peer-reviewed publications in scientific journals: 43 (including five reviews/comments/study protocols)
- The first author in 13 papers (corresponding author 13)
- Co-author in 30 papers
- Number of scientific peer-reviewed publications based on original work: 38
- Number of comments to peer-reviewed journals: 2
- Number of reports based on original work: 6
- Number of the book/chapter: 2
- Total number of citations (Sept 2022): 1,373 (Source: Google Scholar)
- h-index: 18 (Source: Google Scholar)
- i10-index: 31 (Source: Google Scholar)

Publications based on original works:

2022

1. Sheikh, N., Sarker, A. R., Sultana, M., Mahumud, R. A., **Ahmed, S.**, Islam, M. T., Howick, S. and Morton, A. (2022). Disease-specific distress healthcare financing and catastrophic out-of-pocket expenditure for hospitalization in Bangladesh. *Int J Equity Health*; 21,114. Available at: <https://pubmed.ncbi.nlm.nih.gov/35987656/>
2. Hasan, M. Z., Ahmed, M. W., Mehdi G. G., Khan J.A.M., Islam, Z., Chowdhury, M. E., **Ahmed, S.** Factors Affecting the Utilization of Shasthyo Suroksha Karmasuchi Scheme among the Below-Poverty- Line Population in One Subdistrict in Bangladesh: A Cross Sectional Study". *BMC Health Services Research*; 22(1):885. Available at: <https://pubmed.ncbi.nlm.nih.gov/35804366/>
3. Szabo S., **Ahmed S.**, Wiśniowski A., Pramanik M., Islam R., Zaman F., Kuwornu JKM. Remittances and Food Security in Bangladesh: An Empirical Country-level Analysis. *Public Health Nutrition*; 26,1-11. Available at: <https://pubmed.ncbi.nlm.nih.gov/35616088/>
4. Terfa, Z. G., **Ahmed, S.**, Khan, J., & Niessen, L. W. (2022). Household Microenvironment and Under-Fives Health Outcomes in Uganda: Focusing on Multidimensional Energy Poverty and Women Empowerment Indices. *International Journal of Environmental Research and Public Health*, 19(11), 6684. Available at: <https://pubmed.ncbi.nlm.nih.gov/35682268/>
5. **Ahmed, S.**, Ahmed, M. W., Hasan, M. Z., Mehdi, G. G., Islam, Z., Rehnberg, C., Niessen, L. W., & Khan, J. A. M. (2022). Assessing the incidence of catastrophic health expenditure and impoverishment from out-of-pocket payments and their determinants in Bangladesh: evidence from the nationwide Household Income and Expenditure Survey 2016. *International Health* ;14(1):84-96. Available at: <https://pubmed.ncbi.nlm.nih.gov/33823538/>
6. Rahman M, Tariqujjaman M, Islam MR, Sheikh SP, Sultana N, Ahmed T, **Ahmed S**, Sarma H. (2022). Socioeconomic Inequalities in Women's Undernutrition: Evidence from Nationally Representative Cross-Sectional Bangladesh Demographic and Health Survey 2017-2018. *Int J Environ Res Public Health*; 19(8):4698. Available at: <https://pubmed.ncbi.nlm.nih.gov/35457563/>

2021

7. Hasan, M. Z., Mehdi, G. G., de Broucker, G., **Ahmed, S.**, Ali, M. W., Martin Del Campo, J., Constenla, D., Patenaude, B., & Uddin, M. J. (2021). The economic burden of diarrhea in children under 5 years in Bangladesh. *International Journal of Infectious Diseases*, 107, 37–46. Available at: <https://doi.org/10.1016/j.ijid.2021.04.038>
8. **Ahmed, S.**, Koudou, G. B., Bagot, M., Drabo, F., Bougma, W. R., Pulford, C., Bockarie, M., Harrison, R. A. (2021). Health and economic burden estimates of snakebite management upon health facilities in three regions of southern Burkina Faso. *PLOS Neglected Tropical Diseases*;15(6):e0009464. Available at: <https://doi.org/10.1371/journal.pntd.0009464>
9. Odihi, D., de Broucker, G., Hasan, Z., **Ahmed, S.**, Constenla, D., Uddin, J., & Patenaude, B. (2021). Contingent Valuation: A Pilot Study for Eliciting Willingness to Pay for a Reduction in Mortality From Vaccine-Preventable

- Illnesses for Children and Adults in Bangladesh. *Value in Health Regional Issues*, 24, 67–76. Available at: <https://pubmed.ncbi.nlm.nih.gov/33508753/>
10. de Broucker, G., **Ahmed, S.**, Hasan, M. Z., Mehdi, G. G., Martin Del Campo, J., Ali, M. W., Uddin, M. J., Constenla, D., & Patenaude, B. (2020). The economic burden of measles in children under five in Bangladesh. *BMC Health Services Research*, 20(1), 1–9. Available at: <https://pubmed.ncbi.nlm.nih.gov/33172442/>

2020

11. **Ahmed S**, Sarma H, Hasan MZ, ... , Khan JAM., 2020. Cost-effectiveness of a Market-Based Home-fortification of Food with Micronutrient Powder Programme in Bangladesh. *Public Health Nutr.* 2020 Oct 29;1-12. doi: 10.1017/S1368980020003602. Available from: <https://pubmed.ncbi.nlm.nih.gov/33118899/>
12. **Ahmed S.**, Sarker AR., Sultana M., Roth F., Mahumud RA., Kamruzzaman M., Hasan MZ., Mirelman AJ., Islam Z., Niessen LW., Rehnberg C., Khan AKZ., Gyr N., Khan JAM., 2020. Do Employer-Sponsored Health Insurance Schemes affect the Utilization of Medically Trained Providers and Out-of-pocket Payments among Ready-Made Garment Workers? – a Case-Control Study in Bangladesh, *BMJ Open*.10(3):e030298. Doi: 10.1136/bmjopen-2019-030298. Available from: <https://pubmed.ncbi.nlm.nih.gov/32132134/>
13. **Ahmed S**, Hasan MZ, Pongsiri MJ, Ahmed MW, Szabo S. 2020. Effect of extreme weather events on injury, disability, and death in Bangladesh. *Clim Dev* . Taylor & Francis;0:1–12. Available from: <https://doi.org/10.1080/17565529.2020.1772705>
14. Chowdhury AS, Ahmed MS, **Ahmed S**, Khanam F, Farjana F, Reza S, et al. Estimating Catastrophic Costs due to Pulmonary Tuberculosis in Bangladesh. *J Epidemiol Glob Health*. 2020;11(1):83-91. doi: 10.2991/jegh.k.200530.001. Available from: <https://pubmed.ncbi.nlm.nih.gov/32959604/>
15. Hasan MM, Tasnim F, Tariqujjaman M, **Ahmed S**, Mamun AA. 2020. Examining the prevalence, correlates and inequalities of undiagnosed hypertension in Nepal: a population-based cross-sectional study. *BMJ Open*. 2020 Oct 1;10(10):e037592. Doi: 10.1136/bmjopen-2020-037592. Available from: <https://pubmed.ncbi.nlm.nih.gov/33004393/>
16. Hasan MM, Magalhaes R, Ahmed S, **Ahmed S**, ..., Mamun A. 2020. Meeting the Global Target in Reproductive, Maternal, Newborn, and Child Health Care Services in Low and Middle-Income Countries. *Glob Heal Sci Pract*. 8 (4). 1-12. Available from: <https://doi.org/10.9745/GHSP-D-20-00097>

2019

17. **Ahmed S**, Hasan MZ, MacLennan M, Dorin F, Ahmed MW, Hasan MM, Hasan SM, Touhidul MI, Khan JAM. 2019. Measuring the efficiency of health systems in Asia: A data envelopment analysis. *BMJ Open*. 9(3):e022155.
18. **Ahmed, S.**, Hasan, Z., Laokri, S., Jannat, Z., Ahmed, M. W., Dorin, F., ... Khan, J. A. M. (2019). Technical efficiency of public district hospitals in Bangladesh: a data envelopment analysis. *Cost Eff Resour Alloc*. 24;17:15.
19. **Ahmed S**, Tariqujjaman M, Arafat MR, Zahid MH, Mehedi MH, Inequities in the Prevalence of Undiagnosed Hypertension among Bangladeshi Adults: Evidence

from a Nationwide Survey. *Int J Equity Health*. 2019;18(1):33. Doi: 10.1186/s12939-019-0930-5.

20. Khan JAM, **Ahmed S**, Sultana M, et al. 2019. The effect of a Community-Based Health Insurance for Informal Workers on the Out-of-pocket Payments for Utilizing Healthcare from Medically Trained Providers in Bangladesh. *International Health* ihz083, <https://doi.org/10.1093/inthealth/ihz083>
21. Khan JAM, **Ahmed S**, Chen T, Tomeny EM, Niessen LW. 2019. A Transparent Universal Health Coverage Index with Decomposition by Socioeconomic Groups: Application in Asian and African Settings. *Applied Health Economics and Health Policy*. 17(3):399-410. Doi: 10.1007/s40258-019-00464-9.
22. Hasan M, Tasnim F, Tariqujjaman M, **Ahmed S**. 2019. Socioeconomic Inequalities of Undiagnosed Diabetes in a Resource-Poor Setting: Insights from the Cross-Sectional Bangladesh Demographic and Health Survey 2011. *Int J Environ Res Public Health*. 2019;16:115. Available from: <http://www.mdpi.com/1660-4601/16/1/115>

2018

23. **Ahmed, S.**, Szabo, S., & Nilsen, K. (2018). Catastrophic healthcare expenditure and impoverishment in tropical deltas: evidence from the Mekong Delta region. *International Journal for Equity in Health*, 17(1), 53. <https://doi.org/10.1186/s12939-018-0757-5>
24. **Ahmed, S.**, Sarker, A. R., Sultana, M., Chakrovorty, S., Ahmed, M. W., Dorin, F., ... Khan, J. A. M. (2018). The impact of community-based health insurance on the utilization of medically trained healthcare providers among informal workers in Bangladesh. *PLOS ONE*, 13(7), e0200265. <https://doi.org/10.1371/journal.pone.0200265>
25. Khan, J. A., **Ahmed, S.**, & Evans, T. G. (2018). Response to a comment on "Unravelling the socioeconomic gradient in the incidence of catastrophic health care expenditure." *Health Policy and Planning*, (April), 1–2. <https://doi.org/10.1093/heapol/czy025>
26. Sarker, A., Sultana, M., **Ahmed, S.**, Mahumud, R., Morton, A., & Khan, J. (2018). Clients' Experience and Satisfaction of Utilizing Healthcare Services in a Community Based Health Insurance Program in Bangladesh. *Int J Environ Res Public Health*, 15(8), 1637. <https://doi.org/10.3390/ijerph15081637>

2017

27. Khan J, **Ahmed S**, Evans T. Catastrophic Healthcare Expenditure and Poverty Related to Out-of-Pocket Payments for Healthcare in Bangladesh – An Estimation of Financial Risk Protection of Universal Health Coverage. *Health Policy Plan*. 2017;1–9. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/28575415>
28. Rahman A, Nisha MK, Begum T, **Ahmed S**, Alam N, Anwar I. Trends, determinants and inequities of 4+ ANC utilisation in Bangladesh. *J Heal Popul Nutr* [Internet]. *Journal of Health, Population and Nutrition*; 2017;36(1):2. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/28086970>

2016

29. **Ahmed S.**, Hoque M.E., Sarker A.R., Sultana M., Islam Z., Gazi R., Khan JAM. 2016. Willingness-to-Pay for Community-Based Health Insurance among Informal Workers in Urban Bangladesh, *PLOS ONE*, 11(2), e0148211. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/26828935>
30. Khan JAM, **Ahmed S**, Maclennan M, Sarker AR, Sultana M, Rahman H. 2016. Benefit incidence analysis of healthcare in Bangladesh – equity matters for universal health coverage. *Health Policy and Planning* 0: czw131. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/28365753>
31. Szabo S, Hossain MS, Adger WN, Matthews Z, **Ahmed S**, Lázár AN, Ahmad S. 2016. Soil salinity, household wealth and food insecurity in tropical deltas: evidence from south-west coast of Bangladesh. *Sustainability Science*. 11(3): 411–21. Available from: <https://pubmed.ncbi.nlm.nih.gov/30174734/>
32. Mirelman A., Rose S., Khan J.A.M., **Ahmed S.**, Peters D.H., Niessen L.W., Trujillo A.J. 2016. The relationship between non-communicable disease occurrence and poverty-evidence from demographic surveillance in Matlab, Bangladesh. *Health Policy and Planning* 31(6): 785–92. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/26843515>
33. Sultana M, Sarker AR, Mahumud RA, **Ahmed S**, Chakrovorty S, Rahman H, Islam Z, Khan JAM. 2016. Inequalities in health status from EQ-5D findings: a cross-sectional study in low-income communities of Bangladesh. *International Journal of Health Policy and Management* 5(5):301–8. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27239879>
34. Sarker AR, Sultana M, Mahumud RA, **Ahmed S**, Ahmed MW, Hoque ME, Islam Z, Gazi R, Khan JAM. 2016. Effects of occupational illness on labor productivity: A socioeconomic aspect of informal sector workers in urban Bangladesh. *Journal of Occupational Health* 58(2):209–15. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27010089>

2015

35. Khan JAM, Trujillo AJ, **Ahmed S**, et al. 2015. Distribution of chronic disease mortality and deterioration in household socioeconomic status in rural Bangladesh: an analysis over a 24-year period. *International Journal of Epidemiology* 44(6):1917–26. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/26467760>

2014

36. Sarker AR, Mahumud RA, Sultana M, **Ahmed S**, Ahmed W, Khan JAM. 2014. The impact of age and sex on healthcare expenditure of households in Bangladesh. *SpringerPlus*, 14;3:435. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/25191633>

2013

37. Sarker, BK, **Ahmed S**, Islam N, Khan JAM, 2013. Cost of behavior change communication channels of Manoshi -a maternal, neonatal and child health (MNCH) program in urban slums of Dhaka, Bangladesh. *Cost Effectiveness and Resource Allocation*, 11(1):28. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/24228844>

38. Khan, J.A. and **Ahmed, S.**, 2013. Impact of educational intervention on willingness-to-pay for health insurance: A study of informal sector workers in urban Bangladesh. *Health economics review*, 3(1):12. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/23628206>

Based on the systematic review, research protocols or comments

2021

39. **Ahmed S** & Khan JAM. 2021. Disseminating public health messages about second-hand smoking through mosque congregations in Bangladesh: a comment. *The Lancet Global Health*. (Accepted for publication on: 3 March 2021).

2019

40. Alatawi A, **Ahmed S**, Niessen L, Khan J. 2019. Systematic review and meta – analysis of public hospital efficiency studies in Gulf region and selected countries in similar settings. *Cost Effectiveness and Resource Allocation* 17:17. Doi: 10.1186/s12962-019-0185-4.

2018

41. Niessen, L.W., Mohan, D., Akuoku, J.K., Mirelman, A.J., **Ahmed, S.**, Koehlmoos, T.P., ... Peters, D.H. (2018). Tackling socioeconomic inequalities and non-communicable diseases in low-income and middle-income countries under the Sustainable Development agenda. *The Lancet*, 391(10134), 2036–2046. Available from: <https://pubmed.ncbi.nlm.nih.gov/29627160/>
42. **Ahmed, S.**, Hasan, M. Z., Ahmed, M. W., Dorin, F., Sultana, M., Islam, Z., ... Chowdhury, M. E. (2018). Evaluating the implementation-related challenges of Shasthyo Suroksha Karmasuchi (health protection scheme) of the government of Bangladesh: a study protocol. *BMC Health Services Research*, 18(1), 552. <https://doi.org/10.1186/s12913-018-3337-x>

2017

43. Sultana M, Mahumud RA, Ali N, **Ahmed S**, Islam Z, Khan JAM, Sarker, AR. The effectiveness of introducing Group Prenatal Care (GPC) in selected health facilities in a district of Bangladesh: study protocol. *BMC Pregnancy and Childbirth*; 2017;17(1):48. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/28143611>

WORKING PAPERS / PUBLISHED REPORTS

1. Vargas V, Begum T, **Ahmed S**, Smith O. 2016. Bangladesh – Fiscal space for health: Toward the Fiscal Space for Health in Bangladesh. Washington D.C., The World Bank.
2. **Ahmed S**. 2016. Trends in Healthcare Financial Risk Protection Indicators of Bangladesh. Dhaka. World Health Organization, Ministry of Health & Family Welfare, Bangladesh
3. Khan JAM, **Ahmed S**. 2016. Analyzing the Benefit-Cost Ratio of Health Interventions for Improving Maternal and Child Mortality and Child Immunization in Bangladesh. Dhaka. Bangladesh Priorities, Copenhagen Consensus Center.
4. Ministry of Health and Family Welfare. 2015. Bangladesh National Health Accounts 1997 – 2012. Technical report. Dhaka

5. Sarker B.K., Islam N., **Ahmed S.**, Khan A.M.J. (2011). Cost of behaviour change communication channels of MANOSHI: An MNCH program in urban slums of Dhaka, Bangladesh. Manoshi working paper no-14. Dhaka, Bangladesh: icddr,b, BRAC.
6. Sarker B.K., Higgins J., Mridha M. K., Ferdous J., Dasgupta S. K., **Ahmed S.**, Khan A.M.J., Reichenbach L. (2011). Caesarean Delivery in Urban Slums of Dhaka City: Indications and Consequences. Manoshi working paper no-18. Dhaka, Bangladesh: icddr,b, BRAC.

BOOK/ BOOK CHAPTER

1. **Ahmed S.** (2020). Healthcare financing challenges and opportunities to achieving universal health coverage in the low- and middle-income country context. Karolinska Institute. ISBN: 978-91-7831-711-0. Available at: <https://openarchive.ki.se/xmlui/handle/10616/46957>
2. Khan JAM, **Ahmed S.** (2017). Estimating return on investment in maternal health, neonatal mortality reduction and child immunization in Bangladesh. *In*: Lomborg B, Rahman M, editors. Bangladesh priorities: helping vision 2012 a reality. Volume 1. Dhaka: A. H. Development Publishing House: 571-603

RESEARCH FUNDING AND PROJECTS

External research funding obtained in the international or national competition as the *principal applicant*

1. Title: Evaluation of the Pilot Project of the Shasthyo Shurokhsha Karmasuchi (Health Protection Scheme) of the Government of Bangladesh: a study in selected upazilas of Tangail district
Role: Principal Investigator
Funding agency: USAID Bangladesh (250,000 USD/ 2,223,300 SEK)
Decision year: 2018
2. Project title: A study to systematically document the implementation related challenges of Shasthyo Suroksha Karmasuchi (Health Protection Scheme) of the Government of Bangladesh,
Role: Principal Investigator
Funding agency: Swedish International Development Cooperation Agency – SIDA (USD 86,000 or 827,372 SEK)
Decision year: 2017
Grant recipient organization: icddr,b, Bangladesh and Karolinska Institutet
3. Project title: GCRF Living Deltas Hub, Donor: UK Research and Innovation (UKRI)
Role: Principal Investigator at icddr,b
Funding agency: UK Research and Innovation (UKRI)
Grant period: 2019-2024 (52,000 USD or 461,825 SEK)
Website: <https://gtr.ukri.org/projects?ref=NE%2FS008926%2F1#/tabOverview>

External research funding obtained in the international or national competition as co-applicant

1. Title: A targeted combination intervention approach for acute HIV infections to curb the explosive epidemic among men who have sex with men in Indonesia
Role: Co-Investigator
Grant recipient organization: University of Oxford and Oxford University Clinical Research Unit (OUCRU)
Funder: Medical Research Council (MRC) – UKRI (total amount requested GBP 617,605)
Period: 2022-2024
2. Title: Modelling resilience to health shocks in Bangladesh for optimal insurance programme design
Funding Agency: EPSRC Global Challenges Research Fund Institutional Sponsorship Award 2016 - University of Strathclyde (GBP 12,000 or 137,600 SEK), Decision year: 2018
Role: Co-Investigator
Grant recipient organization; Liverpool School of Tropical Medicine, United Kingdom
3. Title: “Assessment of Barriers to Access Immunization Services and Cost of Treatment for Vaccine-Preventable Diseases in Health Facilities in Two Areas of Bangladesh”
Role: Co-Investigator
Funder: Johns Hopkins Bloomberg School of Public Health (250,000 USD or 2,223,300 SEK)
Grant period: 2015-2016
4. Title: Developing the capacity for Costing of the Essential Services Package in Bangladesh
Role: Co-Investigator
Donor: World Health Organization (35,507 USD or 315,763 SEK)
Grant period: 2016-2017
5. Title: The Economic Burden of Rotavirus Infection Resulting in Hospitalization among Children <5 Years of Age in Selected Hospitals in Bangladesh
Funding Agency: CDC, USA (USD 49,820 or 480,000 SEK), Decision year: 2014
Role: Co-Investigator
Grant recipient organization: icddr,b, Bangladesh
6. Title: Estimating Costs of Infant and Young Child-Feeding (IYCF) Practices Improvement Program in Bangladesh Using Activity-Based Costing Approach
Funding Agency: International Food Policy Research Institute (2.4M SEK or USD 249,530), Decision year: 2012
Role: Co-Investigator
Grant recipient organization: icddr,b, Bangladesh

7. Title: Evaluation of Health Insurance for Garment's workers – a demand-side perspective
Funding Agency: Swiss Development Agency and Basel University, Switzerland (270,585 SEK or USD 28,076), Decision year: 2012
Role: Co-Investigator
Grant recipient organization: icddr,b, Bangladesh

SCIENTIFIC COLLABORATIONS

1. Professor Abdulrazaq G. Habib, Nigerian Snakebite Research & Intervention Center (NSRIC), Bayero University, Kano, Nigeria. Topic: Economics of snakebite. Period: 2018 – ongoing.
2. George Adinoh, Institute of Primate Research, Animal Sciences Department, Institute of Primate Research, Nairobi, Nairobi Province, Kenya Period: 2018 – ongoing.
3. Dr. Ziaul Islam, Associate Scientist, icddr,b, Bangladesh. Topic: Healthcare financing and economics of health interventions. Period: 2011 – ongoing.
4. Gaten de Broucker, International Vaccine Access Center (IVAC), Johns Hopkins Bloomberg School of Public Health. Baltimore, Maryland, USA Period: 2016 – ongoing
5. Dr. Sylvia Szabo, Climate Change and Sustainable Development, Department of Energy, Environment & Climate Change, Asian Institute of Technology, Thailand, Period: 2013 – ongoing
6. Professor Andy Large, The School of Geography, Politics and Sociology, Newcastle University, United Kingdom, Period: 2018- ongoing
7. Professor Raph Hamers, Head of Clinical Infectious Diseases Research Programme, Eijkman-Oxford Clinical Research Unit (EOCRU), Centre for Tropical Medicine and Global Health, Nuffield Department of Medicine, University of Oxford, United Kingdom, Period: 2020- ongoing

TRAINING AND WORKSHOP ATTENDED

1. Integrating Economic Evaluation into Clinical Trials, Tuesday 7th and Wednesday 8th December 2020, Health Economics Research Centre, Nuffield Department of Population Health, University of Oxford, Oxford, UK
2. Decision Analytic Modelling for Economic Evaluation-Advanced Course; Wednesday 10th – Friday 12th April 2019 at the University of York, UK
3. “Training for Health Accounts Production Tool (HAPT) in Bangladesh”, Health Economics Unit, Ministry of Health and Family Welfare, USAID and Health Finance & Governance, Dhaka, Bangladesh, May 29- June 2, 2016
4. “Strategic Planning and Costing of the Essential Service Package Using the One Health Tool”, Health Economics Unit, Ministry of Health and Family Welfare, USAID and Health Finance & Governance, World Health Organization, Dhaka, Bangladesh, 14-28 September 2016
5. “Regression Methods for Health Economic Evaluation”, Centre for Health Economics, University of York, Heslington, York, United Kingdom, 17th-20th March 2015.
6. “Health Accounts Training Course for Bangladesh NHA Team”, Institute for Health

Policy, Colombo, Sri Lanka, 16th-20th September 2013.

7. Training course on “Measuring Health Equity and Financial Protection Using ADePT” conducted by The World Bank during Second symposium on Health system Research, Beijing, October 31, 2012
8. “Introductory course on Healthcare financing” organized by JPGSPH, BRAC University and icddr,b held on September 24-26, 2012
9. “Introductory course on Universal Health Coverage” organized by JPGSPH, BRAC University and icddr,b held on July 2-4, 2012
10. Workshop on “Introduction to modelling concepts for economic evaluation” organized by Andrew Mirelman of Johns Hopkins Bloomberg School of Public Health at icddr,b, Mohakhali, Dhaka-1212, year 2011.
11. Training course on SPSS for Professional, Researchers and Students, organized by Department of Statistics Biostatistics and Informatics, University of Dhaka, Sept-Oct 2009
12. Senior certificate (1 year) & Junior certificate (1 year) courses on the French language from the Institute of Modern Languages, University of Dhaka
13. Junior certificate (1 year) course on Chinese from the Institute of Modern Languages, University of Dhaka

Other training

1. “Online Research Writing Course”, AuthorAID and INASP, 2 months, 2012.
2. Training course on “Effective communication skills” organized by human resource management unit of icddr,b held on December 19-20,2011
3. Workshop on “Advanced ethical issues in developing country research” organized by Richard A. Cash of Harvard School of Public Health at icddr,b on 29-30 June 2011

AWARDS AND ACHIEVEMENTS

- Earned meritorious within-grade step increase award at icddr,b in recognition of exceptional performance in 2017
- Awarded research grant for early career researcher in 2017 by the Swedish International Development Cooperation Agency (Sida)

COMPUTER SKILLS & STATISTICAL PACKAGES

STATA, SPSS, R-language, MS office

LANGUAGE

- Bengali (Vernacular)
- English (Proficient)
- French (Beginner)
- Chinese (Beginner)

PRESENTATIONS AT CONFERENCES AND SEMINARS

1. Sayem Ahmed, “Cost-Effectiveness Analysis of the National Scaling up of Human Papillomavirus Vaccination for the Prevention of Cervical Cancer in Bangladesh”, Presented at International Health Economics Association (iHEA) congress 2019, held in Basel, Switzerland, on 13-17th July 2019.
2. Sayem Ahmed, “The Impact of Community-Based Health Insurance on Utilization of Medically Trained Healthcare Providers among Informal Workers in Bangladesh”, Presented at European Health Economic Association (EuHEA) Conference 2016, held in Hamburg, Germany, on 13-16th July 2016.
3. Sayem Ahmed, “Impact of Community-Based Health Insurance on Accessing Quality Healthcare at Low Cost by Informal Workers”, Presented at Universal Health Coverage Conference 2015, held in Dhaka on 9-11th April 2015.
4. Sayem Ahmed and Dr. Jahangir AM Khan, “Healthcare Financing - Challenges and Opportunities for Achieving Universal Health Coverage in Bangladesh”, hosted by the Department of Learning, Informatics, Management and Ethics (LIME) at Karolinska Institutet, Sweden on 31st March 2015.
5. Sayem Ahmed and Dr. Jahangir AM Khan, “Rising Health Needs, Catastrophic Health Expenditure, and Poverty? -Reporting Challenges and Prospects for Universal Health Coverage in Bangladesh” presented at Centre for Applied Health Research and Delivery (CAHRD) and its Health Economics Unit at Liverpool School of Tropical Medicine, the United Kingdom on 23rd March 2015.
6. Sayem Ahmed, “Catastrophic health care spending and economic impoverishment in Bangladesh - An analysis of Household Income and Expenditure Survey, 2010”, Presented at the Symposium on Health Economics Issues and Health Financing, held in Dhaka University, Dhaka on 20-21 April 2013
7. Sayem Ahmed, “Health care expenditure and coping mechanism of informal sector workers in Bangladesh”, presented at the Second Global Symposium on Health System Research, held in Beijing on 31st October to 3rd November 2012.

EVALUATION OF OTHERS' WORK

Editorial board member

BMC health services Research

The Campus, 4 Crinan Street

N1 9XW – London, United Kingdom

PLOS Global Public Health

San Francisco, California, and Cambridge, United Kingdom

Editorial and referee work

- *Applied Health Economics and Policy*

- *BMJ Open*

- *PLOS ONE*

- *Lancet Global Health*

- *International Journal of Environmental Research and Public Health*

- *Health Policy and Planning*

- *European Journal of Development Research*
- *International Journal of Health Policy and Management*
- *International Journal for Equity in Health*
- *The Geneva Papers*
- *Cost-Effectiveness and Resource Allocation*

Peer reviewer for grant awarding bodies

- *Evaluated* research proposals for the Economic and Social Research Council, United Kingdom
- UK Research and Innovation

TEACHING PORTFOLIO

Formal education in teaching and learning

- Completed SEDA Professional Development Award Professional Certificate in Supporting Learning from the Liverpool School of Tropical Medicine (LSTM), UK in 2022
- Completed 4 weeks of pedagogical course titled “Teaching and Learning in Higher Education” at Karolinska Institute as part of my PhD study
Dates: 02-30 October 2017
Organizer: Jonas Nordquist, Department of Medicine, Karolinska Institutet, Huddinge, Sweden
Scope: Following topics were covered in the course: Knowledge and learning, teacher and student role, Outcome-based education, teaching methods, the role of professional teacher
- Participated in online session on e-learning and virtual classroom platform Bongo and Brightspace

Teaching activities

- **University of Glasgow (2022 - continuing):** Contributing in ‘Health Care Systems: Decision Making’ module of ‘MSc in Health Economics for Health Technology Assessment (HTA) – online’ program
Activities: Prepare recorded lectures, maintain communication in online forum, theses supervision, examinations
Academic levels: Master’s in health economics (multidisciplinary and multinational students)
- **Liverpool School of Tropical Medicine (2018- 2020):** Teaching for international MPH students at Liverpool School of Tropical Medicine.
Contributed to three courses: 1) Key themes in international health and health policy (TROP937), 2) Topics in global health (LIFE236) 3) Online MSc Global Health programme
Subject: Health burden of neglected tropical disease, Health economics- health financing, economic evaluation, and inequality in healthcare

Activities: Classroom lectures, group work, theses supervision, examinations
Academic levels: MPH students (multidisciplinary and multinational)

- **Karolinska Institutet (2016-2017):** Conducted 31 hours teaching sessions for Master of Health Economics Management students at the Department of Learning informatics Management and Ethics (LIME) of Karolinska Institutet during my PhD
Course Title: Health Economics- Financing Health and Medical Care (4FH052 HT16)
Subject: Basic Health Economics
Activities: Classroom lectures, group work, theses supervision, examinations
Academic levels: Master of Health Economics Management students
- **Independent University Bangladesh (2016-2018):** Course leader for health economics and management module for Master of Public Health students at Department of Learning informatics Management and Ethics
Course Title: Health Economics and Management (HSC 535)
Subject: Health economics – health financing, economic evaluation, and inequality in healthcare
Activities: Classroom lectures, group work, examinations
Academic levels: MPH students (multi-disciplinary)

References for teaching experiences

- **Liverpool School of Tropical Medicine, Liverpool:**
 - Professor Robert Harrison, Department of Tropical Disease Biology, email: robert.harrison@lstm.ac.uk
 - Tinevimbo Shiri, Health Economics & Outcomes Research Ltd, email: tinevimbo.shiri@heor.co.uk
 - Dr Jahangir AM Khan, Gothenburg University, email: jahangir.khan@gu.se
- **Karolinska Institutet, Stockholm:**
Professor Clas Rehnberg, email: clas.rehnberg@ki.se
- **Independent University of Bangladesh, Dhaka:**
Dr. S. M. Raysul Haque, email: raysul.haque@gmail.com

Training facilitated

1. Co-facilitate the course titled “Financing Health and Medical Care” for master’s student at Department of LIME, Karolinska Institutet, Stockholm, October-November 2016
2. Hands-on Training course on SPSS, Health Economics Unit, Ministry of Health and Family Welfare, Bangladesh, September 2012 (Facilitator)
3. Hands-on Training course on STATA, Health Economics Unit, Ministry of Health and Family Welfare, Bangladesh, June 2013 (Facilitator)
4. Training Course on “Household Survey Data Analysis Using STATA”, James P Grant School of Public Health, BRAC University, Bangladesh, March-April 2013 (Facilitator)
5. “Short Course on Measuring and Monitoring Health Equity using ADePT Health”

organized by The World Bank at James P Grant School of Public Health, BRAC University, and icddr,b, October 31, 2012 (Co-facilitator)

6. "Introductory course on Healthcare financing" organized by James P Grant School of Public Health, BRAC University and icddr,b held on September 24-26, 2012 (Co-facilitator)

PhD student supervision

1. **Huyen Nguyen Anh**, Open University, Milton Keynes, UK
Research topic: The cost-effectiveness of Direct-Acting Antiretroviral drugs for Hepatitis C Virus treatment
Supervisory role: Co-supervisor
Period: Dec 2020- Jan 2021
2. **Khaled Althabaiti**, Gothenburg University, Gothenburg, Sweden
Research topic: Health Insurance in Saudi Arabia: Evaluation and stakeholder Perception
Supervisory role: Co-supervisor
Period: 2021- continuing
3. **Mohannad Taha Omar Alkhateeb**, Gothenburg University, Gothenburg, Sweden
Research topic: Influence of health workers' job satisfaction and leadership training on the efficiency of health facilities in Saudi Arabia
Supervisory role: Co-supervisor
Period: 2021- continuing

Master student supervision

1. **Supervised Marc Bentele** in his master thesis work titled "Resource use and cost associated with bailout stenting in treatment of de novo lesions in femoral and proximal-popliteal arteries" in 2022 at University of Glasgow, Glasgow
2. **Supervised Hitansh Patel** in his master thesis work titled "The Effect of the Government Funded Shasthyo Surokhsha Karmasuchi (SSK) on the Out-Of-Pocket Payments Among Below-Poverty Line Population in Bangladesh" in 2022 at University of Strathclyde, Glasgow
3. **Supervised Iani Kirey** in her master thesis work titled "Cost-effectiveness analysis of trans-specific medical interventions in Sweden" in 2021 at University of Gothenburg, Gothenburg
4. **Supervised Iani Kirey** in her master thesis work titled "Cost-effectiveness analysis of trans-specific medical interventions in Sweden" in 2021 at University of Gothenburg, Gothenburg
5. **Co-supervised Sabit Shafiq** in his master thesis work titled "Cost effectiveness of Cholera vaccination in Bangladesh" in 2021 at University of Gothenburg, Gothenburg.
6. **Co-supervised Mariko Tomita** in her master's thesis work titled "Assessing the cost-effectiveness of an immunization programme with different types of HPV vaccines for females in Japan" in 2019 at Liverpool School of Tropical Medicine (LSTM), Liverpool.
7. **Supervised Rabiah Adawiyah** in her master's thesis work titled "Equity impact of the National Health Insurance Program on the utilization of maternal healthcare

services across regions in Indonesia” in 2016 at Department of LIME, Karolinska Institutet, Stockholm.

8. **Supervised Galiba Rabbani** in her master’s thesis work titled “Out of Pocket Health Expenditure during Stay in a District Hospital of Bangladesh: Formal and Informal Payments” in 2013 at JPGSPH, BRAC University, Dhaka.

MENTORSHIP

I mentored junior research staff in Bangladesh during my tenure at icddr,b. One of my mentees (Md. Zahid Hasan) in Bangladesh is now working at icddr,b as Research Investigator and leading several research projects on health economics. One of my thesis students (Rabiah Al Adawiyah) enrolled in the PhD program at The University of New South Wales, Australia.

REFERENCES

Dr. Kathleen Anne Boyd

Reader (Health Economics)
Health Economics & Health Technology Assessment (HEHTA)
Institute of Health & Wellbeing, University of Glasgow
1 Lilybank Gardens, Glasgow, G12 8RZ
email: Kathleen.Boyd@glasgow.ac.uk
Tel: +44(0)141 3302713

Prof. Jahangir A.M. Khan

Professor in Health Economics
Health Economics and Policy Unit
School of Public Health and Community Medicine
University of Gothenburg, PO BOX 463, SE-405 30 Göteborg, Sweden
Visiting address: Medicinaregatan 18A, 405 30 Gothenburg, Sweden
email: jahangir.khan@gu.se
Tel: +46 769 159 820

Dr. Marc Choisy

Head Mathematical Modelling Group
Centre for Tropical Medicine and Global Health,
Nuffield Department of Medicine, University of Oxford
Based at: Oxford University of Clinical Research (OUCRU),
764 Vo Van Kiet Street, Ward 1, District 5, Ho Chi Minh City, 700000, Vietnam
email: mchoisy@oucru.org
Tel: +84338997896

Dr. Andrew Mirelman

Technical Officer
Health Systems Governance and Financing Department
Universal Health Coverage and Life Course
World Health Organization
Avenue Appia 20, 1202 Geneva, Switzerland

email: mirelmana@who.int
Tel: +44 750 802 1569

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