

Celebrating **10** YEARS of Dedication Excellence and Impact



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“When ARK was established a decade ago, our mission and vision were clear: to conduct needs-based research that would have a profound impact on improving the quality of life and health of the people we serve.”

Message from the Executive Director

Dear Friends, Partners, and Supporters,

On behalf of ARK Foundation, I would like to extend my warmest greetings to all of you on the occasion of our 10th anniversary! Over the past 10 years, ARK Foundation has grown from a small organisation with a few dedicated individuals to a renowned research-based NGO in Bangladesh. It is with great joy and gratitude that I reflect on the remarkable journey we have undertaken in the field of public health.

When ARK was established a decade ago, our mission and vision were clear: to conduct needs-based research that would have a profound impact on improving the quality of life and health of the people we serve. We set out to not only generate evidence but also to actively contribute to policy implementation, ensuring that our findings translate into tangible improvements in healthcare.

One of our core objectives has been to create opportunities for early and mid-career researchers to grow in the field of research. We firmly believe in nurturing talent and empowering individuals to become leaders in their respective domains. Additionally, we have been committed to promoting gender equality and women's empowerment, providing a platform for women to work with ARK and develop their leadership qualities and capacities. I am proud to say that our team comprises a group of enthusiastic, hardworking, and dedicated researchers who are making a difference every day.

Over the past decade, we may not have achieved all our dreams, but we have made significant contributions in various areas. Our work in non-communicable disease control, communicable disease control (especially in TB control), tobacco and tax, mental health, and creating a conducive working environment for NGOs has garnered recognition and impact.

We have welcomed interns, guided them to set their future aims, and have actively supported researchers pursuing their PhD degrees, contributing to their careers in meaningful ways. However, it is important to acknowledge that ARK's accomplishments would not have been possible without the unwavering support of the government, funding organisations, national and international partners, and, most importantly, our dedicated and diverse research and management team. Your support has been the backbone of our success over the past decade, and I humbly request your continued support in the future.

Looking ahead, I am filled with optimism for the next 10 years of ARK's journey. We aspire to conduct even more meaningful and impactful research, generating evidence that will drive innovation and interventions to improve the lives of the general population. As we move forward, let us always remember the values that define us: Dedication, Excellence, and Impact. These three words encapsulate our commitment to research that truly makes a difference.

Once again, I extend my heartfelt gratitude to each and every one of you for your invaluable support. Together, let us continue to strive for a healthier and brighter future for all.

With warm regards

Rumana Huque

Prof. Rumana Huque

Executive Director



MESSAGES FROM OUR PARTNERS COLLABORATORS SUPERVISORS AND MENTORS



Messages from our Partners, Collaborators, Supervisors and Mentors



Professor Dr. A H M Enayet Hussain

Vice Chancellor
Sylhet Medical University
Bangladesh

I have had the privilege of working closely with ARK Foundation, witnessing the dedication, passion, and unwavering commitment to excellence that each and every one of them brings to their work. I have had the opportunity to witness the impact of their research on policy-making and decision-making processes. Today, they celebrate not only the achievements of the organisation but also the collective efforts of every individual who has contributed to its success.

As we look back on the past 10 years, let us also look forward to the future with optimism and enthusiasm. I have no doubt that with the talent, expertise, and collaborative spirit that exists within this organisation, they will continue to achieve even greater heights in the years to come.

Congratulations to the ARK Foundation on this momentous occasion. May this 10th year anniversary be a reminder of the incredible impact we have made together and a source of inspiration for the remarkable achievements that lie ahead.

Prof. Dr. Mohammad Robed Amin

Line Director, Non-Communicable Disease Control (NCDC)
Directorate General of Health Services (DGHS)
Ministry of Health and Family Welfare, Bangladesh



Completing a decade of commitment, innovation, and research is a remarkable feat, and for this, I would like to express my heartfelt congratulations to ARK Foundation on reaching this significant milestone. Their commitment to scientific research, health system strengthening, and the pursuit of knowledge has made a lasting impact on the lives of countless individuals.

On this remarkable journey of 10 years, the organization has been at the forefront of generating evidence particularly towards strengthening health systems against major Non-Communicable Diseases (NCDs) and their risk factors. I have been a witness to this firsthand through my involvement with many of their projects, one of which has been the Community-led Responsive and Effective Urban Health Systems (CHORUS) which has a focus on strengthening the urban primary health care system.

In this project, Non-Communicable Disease Control (NCDC) Programme has collaborated with ARK Foundation, to strengthen the Government Outdoor Dispensaries of Dhaka by providing them with the “National Protocol for Management of High Blood Pressure and Diabetes at Primary Health Care Settings”, training the workforce on the Protocol and digitalizing the health information system at these facilities by introducing “Simple App” and providing them with the equipment to operate the application. This is a crucial first step in successfully combating the challenges faced by primary healthcare settings and controlling NCDs among urban dwellers, especially the urban poor.

Once again, congratulations to ARK Foundation on this occasion. May this organization see more success and even turn into a leading organization in Bangladesh in Public Health Research.



Prof. Dr. Md. Nazmul Islam

Director, Disease Control
Line Director, Communicable Disease Control (CDC)
Directorate General of Health Services (DGHS)
Ministry of Health and Family Welfare, Bangladesh

I would like to express my heartfelt congratulations to ARK Foundation on reaching this significant milestone. Ten years of unwavering dedication, innovation, and collaboration is a remarkable achievement. Your commitment to scientific research, community engagement, and the pursuit of knowledge has made a lasting impact on the lives of countless individuals.

This remarkable organisation has been at the forefront of community engagement and research, particularly in the field of Antimicrobial Resistance (AMR) containment. I have had the privilege of witnessing the incredible work that ARK Foundation is doing. They are the pioneer in utilising a community engagement approach in educating and empowering individuals to understand the importance of tackling AMR. We firmly believe that our collaborative work to scale up this project will further strengthen our efforts in combating antimicrobial resistance and protecting the health of our communities

Once again, congratulations to ARK Foundation on this momentous occasion. May the next decade be filled with even greater achievements and advancements in the field of public health.

Professor Kamran Siddiqi

Professor in Global Public Health, Department of Health Sciences
University of York, and
Associate Dean (Int.), Hull York Medical School
United Kingdom (UK)



I am thrilled to learn that the ARK Foundation is celebrating its 10th anniversary this year. Personally, this is a moment of great pride for me since I had the honour of signing the first research contract with ARK Foundation. I am also amazed by the leadership and dedication shown by Dr. Rumana Huque, who has single-handedly built this organisation and brought it to the point where it has become a research institute of international repute. I applaud the team of dedicated researchers, many of whom have been there since the beginning, and who have supported Dr. Rumana Huque in this remarkable achievement. The support staff has been phenomenal in ensuring that the organisation's work is delivered within a robust financial and administrative framework. I also express my gratitude to several other senior academics and policymakers who have recognized the important work the organisation is doing and provided space for it to grow and have the impact it deserves. I look forward to another decade in which I see the ARK Foundation becoming the top research institute in applied health research in Bangladesh and serving as a beacon of hope for the whole region.



Professor Tim Ensor

Professor of International Health Systems Research, and
Former Head of the Nuffield Centre for International Health & Development
University of Leeds, UK

It is a great pleasure to write about the ARK Foundation, Bangladesh on the occasion of their 10th Anniversary.

The ARK Foundation has established itself as a sector leader in undertaking applied public health research in Bangladesh. The organisation is deeply committed to informing the policy process. The combination of rigorous research and priority placed on developing long term, trusting relationships with policy makers has meant that its research is impacting on the health system of country across many sub-sectors.

The influence of ARK is disproportional to its size. ARK has a substantial portfolio of projects across the public health and health policy arena. Staff from ARK are regularly asked to provide expert advice to the Government and international agencies. Increasingly, ARK outputs are being communicated at an international level through academic conferences and in consultations with international agencies. Their own website lists a huge list of outputs contributing to the scientific evidence base as well as outputs that are accessible to a range of other stakeholders.

ARK has a strong commitment to equity. The organisation has always prioritised work that impacts the poor and other vulnerable groups including people suffering from mental illness, transgender communities and those living in informal settlements. This work will help to increase access to effective health systems by these groups. The success of ARK is achieved because of its highly committed and professional staff led by Professor Rumana Huque. Rumana demonstrates the characteristics of a good leader in her mentoring for those at earlier stages of their career. She has been highly successful in attracting highly intelligent, motivated researchers to work on interesting, impactful projects that will benefit the sector and help establish their own careers.

My congratulations to ARK on reaching your tenth anniversary. It is my expectation that the impact of your organisation will grow over the next ten years and continue to benefit the health sector in Bangladesh and in other countries.

Professor Linda Bauld OBE

Bruce and John Usher Chair in Public Health, Usher Institute
University of Edinburgh, UK



Many congratulations to the ARK Foundation on their 10th Anniversary. My colleagues and I in the Usher Institute at the University of Edinburgh have had the pleasure of collaborating with ARK's Executive Director, Professor Rumana Huque, and outstanding ARK researchers over several years. This included in the four-year Tobacco Control Capacity Programme funded by the UK's Medical Research Council and most recently in RESPIRE II funded by the National Institute for Health Research. These studies focus on interdisciplinary research to prevent Non-Communicable Diseases particularly through population level and individual interventions. I know the Foundation will go from strength to strength and we look forward to continuing to work together to improve global health.



Najma Siddiqi
Professor of Psychiatry
University of York & Hull York Medical School

Many congratulations to the ARK Foundation team for an outstanding 10 years contributing and leading many fields of research including mental health. Their dedication to developing expertise in vital areas and their unwavering support for early and mid-career researchers are truly commendable. ARK's collaborative efforts with the government and community engagement activities demonstrate a commitment to strengthening community and system capacity and real world impact of their work. I wish ARK the best and encourage them to keep up the excellent work.



Professor Helen Elsey
Professor of Public Health
University of York

I am so happy to be able to congratulate ARK Foundation on 10 years of amazing health research here in Bangladesh. I have been so honoured to work with the team. I think since those early days I have seen ARK grow from a really small organization, with incredibly dedicated health researchers, to what is now a really flourishing research organization involved in all sorts of research methods; whether it is trials, qualitative, surveys, or participatory methods. The thing that has really impressed me and what I love about working with the ARK team is how closely they work with the government at all levels; whether it is health providers at facility levels, right from community clinics all the way through to government outdoor dispensaries within Urban areas to the Ministry level and such good engagement throughout the projects. I appreciate working with ARK researchers; they will always go above and beyond. They work such long hours and they are really committed to a quality job. The other thing that is brilliant going forward is how the ARK team are continually looking forward to the problems of tomorrow; thinking about climate change, urbanization, and always looking for gender equity within what they are doing. I particularly want to mention the strong female researchers in ARK who are really leading the way. It is absolutely encouraging and such a great example for research NGOs in Bangladesh, and across South Asia.

Working with them has been a real pleasure over these 10 years. So, I just want to wish ARK a very happy 10-year celebration and I hope that in the next 10 years, we will continue to work together.



Professor Tolib Mirzoev

Department of Global Health and Development
London School of Hygiene and Tropical Medicine
United Kingdom

Sincere congratulations to the ARK Foundation on your 10th anniversary! This is certainly a significant milestone to be proud of, reflecting excellent leadership from Professor Rumana and clear dedication, hard work and camaraderie from each and everyone within the ARK team.

I have had a privilege to know and collaborate with members of the ARK Foundation for a number of years now across different projects and programmes. It has always been a reassuring, enjoyable and constructive collaborative exchange, filled with mutual respect and mutual learning. Of course, strong partnerships between the ARK team with health policy-makers and practitioners are important prerequisites of high impact of the work of the ARK Foundation on policy and practice in Bangladesh and beyond. The international recognition that the ARK Foundation team has achieved in the last decade is equally impressive.

I am honoured to have provided my modest contributions to the research portfolio of the ARK Foundation, and very much looking forward to our continued collaboration in the future. Happy 10th Birthday and looking forward to seeing further growth and development in the next decade and beyond!

Dr. Sushil Baral

Managing Director, HERD International
Nepal



I am delighted to extend my heartfelt congratulations to the ARK Foundation on the successful completion of its 10th year since establishment. I believe this celebration is a true testament to the dedication and commitment of the organisation towards evidence generation and socio-economic development in Bangladesh.

This occasion serves as a reminder of the long-standing partnership between ARK Foundation and HERD International. Together, we have been diligently working to address critical areas in health, including tuberculosis, antimicrobial resistance, and health system strengthening. Throughout our collaboration, we have achieved remarkable milestones, successfully tackling complex challenges, exchanging innovative ideas, and generating valuable insights in the projects we undertake. I believe we will further foster this collaboration in the years to come by meaningful exchange and shared learning for mutual growth enabling us to continue impactful research and build resilient health systems in both the countries.

Once again, congratulations to the entire team at ARK Foundation on this remarkable achievement, and may your journey be filled with even more breakthroughs and accomplishments.



Dr Rebecca King

Head of the Nuffield Centre for International Health and Development
University of Leeds, UK

I have had a wonderful working relationship with the ARK Foundation since the beginning of our collaboration. I started working with them as a researcher on the COMDIS HSD Research Programme Consortium (RPC), where we did several projects together. Later, I became more involved in their IMCI project.

Since 2017, I have been working more intensively with the ARK Foundation, which is one of my two main international research partners. Now we are working on a large-scale project that aims to address antimicrobial resistance with an innovative community engagement approach. It scales up the Community Dialogue intervention that we piloted in 2017-2018, which involved having regular meetings on antibiotic resistance issues in rural communities in Bangladesh.

I am very impressed by the reliability, hard work, and collaborative spirit of the Ark Foundation. They always deliver high-quality research, and I never have to worry about anything. I feel very lucky to have them as my partners, and I enjoy working with them.

The ARK Foundation is going to celebrate its 10th anniversary. This is a remarkable achievement that deserves a lot of celebration. I want to congratulate them and everyone involved in their success. I hope we can continue our fruitful partnership for many more years. Thank you for your dedication and contribution to the field.

Dr. Cath Jackson

Visiting Senior Research Fellow
University of York, UK
And
Director, Valid Research Ltd, UK.



I have been working with ARK for 8 years across many tobacco-related research projects including ASTRA, CLASS II, CLASS III, MCLASS II and IMPRESS. In that time, I have had the pleasure of meeting and collaborating with the inspirational Rumana and many talented young researchers in her team. My role has been to develop capacity in qualitative research methods, and I am so proud of what we have all achieved. When we started out, no one had any experience with this. Now, there is a team of highly skilled qualitative researchers as well as others who have left to use these skills elsewhere.

Congratulations to ARK in celebrating 10 years! What fantastic work you do in developing the health, social and economic development of Bangladesh. I very much look forward to future collaborations.



Dr. Mahmuda Ali
Assistant Health Officer
Dhaka North City Corporation

Over the years, I have had the opportunity of working closely with the ARK Foundation, and it has been an incredible journey. Together, we have witnessed the transformative power of community-driven initiatives that seek to uplift urban populations, especially those who are often marginalized.

ARK researchers have worked hand in hand with government agencies. This collaboration has not only enhanced the effectiveness of healthcare delivery but has also set a shining example for how organizations can work harmoniously with government bodies to drive meaningful change.

In my years of collaboration with ARK, I have witnessed the passion, dedication, and expertise of the individuals who form the backbone of this organization. As we celebrate this milestone, let us remember that the work of ARK is far from over. The challenges of urban equity persist, and new hurdles may arise. However, with the remarkable achievements of the past decade as our foundation, I am confident that ARK will continue to be at the forefront of positive change in urban communities.

Congratulations to the ARK Foundation on 10 years of exceptional research, and here's to many more years of making a real difference in the lives of individuals and communities.

Advocate Syed Mahbubul Alam Tahin
Technical Adviser
The Union



The ARK Foundation is an amazing organisation that is producing data to support health care systems. Their research efforts in support of public health initiatives are boosting health policy. Along with supporting research, this organisation helps young researchers develop their skills so they can lead Bangladesh in the future. Congratulations to the ARK team on this special achievement!



Mr. Md. Kausar Alam, Advisor (Finance)
FCS, FCCA, ACA (ICAEW), FCMA

"It gives me great pleasure to celebrate the 10th anniversary of ARK Foundation. This milestone is marked by a series of exciting festivities and month-long activities, culminating in a program on October 14, 2023. Since its establishment in 2013, ARK Foundation has been dedicated to upholding high financial governance and ethical standards. By fostering a research ecosystem, the organization has successfully achieved its objectives and built trusted partnerships with grantors and research partners.

From the very beginning, the ARK Foundation has implemented robust processes and policies to ensure compliance with legal, regulatory, and governance requirements. These measures have greatly contributed to the efficient and effective management of projects. Looking ahead, ARK Foundation is committed to creating more opportunities for good governance, fostering learning and unlocking the potential of our research and activities.

I would like to express my heartfelt gratitude to all the organizations, development partners, stakeholders, and well-wishers who have provided invaluable support and cooperation to ARK Foundation, ensuring the smooth execution of our activities.



ARK FOUNDATION: A BRIEF OVERVIEW



ARK FOUNDATION: A BRIEF OVERVIEW

ARK Foundation is a non-government, non-political and not-for-profit organisation, dedicated to the socio-economic development of Bangladesh. Through needs-based research, training and communications, it provides sustainable solutions for health, education and social development.

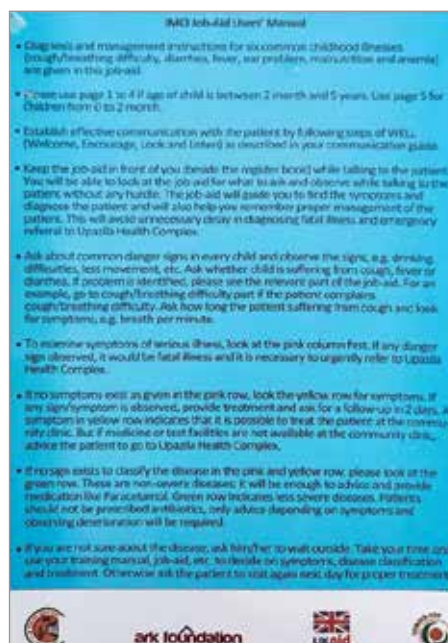
Mission: Our mission is to create impact on people’s lives through operations research, evidence-based solution, training, advocacy and communication in the fields of health, nutrition, population, education, gender, environment and human resources development.

Vision: ARK Foundation’s vision is to be a leading research and advocacy centre pursuing sustainable solutions for inclusive development of Bangladesh. This is the desired future state that ARK Foundation strives to reach.

Values: These are the core beliefs and principles that guide ARK Foundation’s actions and decisions. ARK Foundation’s values are integrity and transparency, equity and responsiveness, innovation and excellence, and continuous improvement.

ARK has a long track record of providing evidence-based inputs to steer the direction of policy and practice. Our multidisciplinary team has extensive experience in conducting trials, operation research, cross sectional surveys, process evaluation and economic evaluation. We have a strong data management team. We have extensive experience of using different software, including in REDCap, Qualtrics, STATA, SPSS, SurveyCTO and NVivo.

Researchers at ARK have excellent skills in engaging with government and different stakeholders to ensure that the research is translated into policy and practice. Over the years, we have facilitated the development of Multi-Sectoral Action Plan, 4th Health Sector Programme in Bangladesh, Five years Roadmap of Tobacco Control in Bangladesh, and Guideline for Patient Grievance Mechanism. We supported the Ministry of Health and Family Welfare of Bangladesh in developing, piloting and integrating the ‘Integrated Management of Childhood Illness (IMCI)’ job aide in the refresher training curriculum for the 13,500 Community Health Care Providers (CHCP). ARK also supported the National TB Control Programme (NTP) in developing and circulating the TB fact sheet nationwide (2013-2016).



We have a strong financial management team, headed by professional accountants, who are conversant about DFID rules and regulation. ARK has successfully received and managed research grants from Ministry of Health and Family Welfare of Bangladesh (MOHFW), Department for International Development (DFID UK), World Health Organisation (WHO), Medical Research Council (MRC), Economic and Social Research Council (ESRC), National Institute for Health Research (NIHR), Global Challenges Research Fund (GCRF), International Development Research Centre Canada (IDRC), Sight Savers, and also Grand Challenges Canada (GCC).

Besides, ARK Foundation has developed and implemented multiple Information, Education and Communication (IEC) materials for different communities, which are available on the website. Researchers at ARK have had their works published in several peer-reviewed international journals, such as Lancet, Lancet Global Health, Cochrane Database of Systematic Reviews, Addiction, Tobacco Control, Thorax, Nicotine and Tobacco Research, BMC Public Health, npj Primary Care Respiratory Medicine, PLoS ONE, BMJ open, International Journal of Tobacco Control and Lung Health, Tropical Disease and Infectious Disease, BMC health services research, Frontiers in Public Health, Frontiers in Health Services, Health Care: Current Reviews, Tobacco Induced Diseases, International Journal of Mental Health Systems, International Journal for Equity in Health and International Journal of Environmental Research and Public Health, BJPsych Open, Frontiers in Psychiatry, Global Mental Health. Determined to attain our visions, ARK believes in working towards developing sustainable solutions and implementing those, through knowledge translation and policy recommendation.

We have experience of working together with partners and collaborators through establishing norms of joint ownership, responsibilities and decision-making. We are trusted partner of several research consortiums, led by the University of Leeds, UK; University of York, UK; and University of Edinburgh, UK. We are also working with University of Stirling, University of Illinois at Chicago, Johns Hopkins University, University of Sheffield, University of Liverpool, University of Cape – Town, South Africa and University of Brunel.

We are collaborating with national and international NGOs and Universities, including MannionDaniels, UK; Malaria Consortium, UK; HRIDAY, India; Maulana Azad Medical College & Associated Hospitals, India; National Institute of Mental Health And Neuro Sciences (NIMHANS), India; HERD, Nepal; National Institute of Mental Health Bangladesh (NIMH); Centre for Injury Prevention and Research, Bangladesh (CIPRB), International Centre for Diarrhoeal Disease Research Bangladesh (icddr,b); Bangladesh Diabetic Association (BADAS); National Heart Foundation (NHF); James P Grant School of Public Health (JPGSPH) BRAC University; and Bureau of Economic Research, University of Dhaka, Bangladesh.

Our Impact

50+ Projects 

12+ Funding Organisations 

120+ Publications
in National and International
Peer Reviewed Journals 

Influenced Policy & Practice 

Partnership with 18+ Countries worldwide
(UK, Australia, Canada, USA, India, Nepal, Pakistan, Sri Lanka, Ghana, Nigeria, Burundi, Uganda, Sudan, Egypt, Lebanon, Niger, Vietnam) 

Received Multiple Awards 

Reached Different Communities
Urban to Rural, privileged to marginal, highly educated to illiterate, high income to poorest, city to heard o reach area 

Embedded Research to Strengthen Health System 

Women Leadership & Empowerment 

Promoted 20+ Early & Mid-career Researchers 

Supported Researchers to Pursue Higher Studies 



Our Partners

International Partners



National Partners



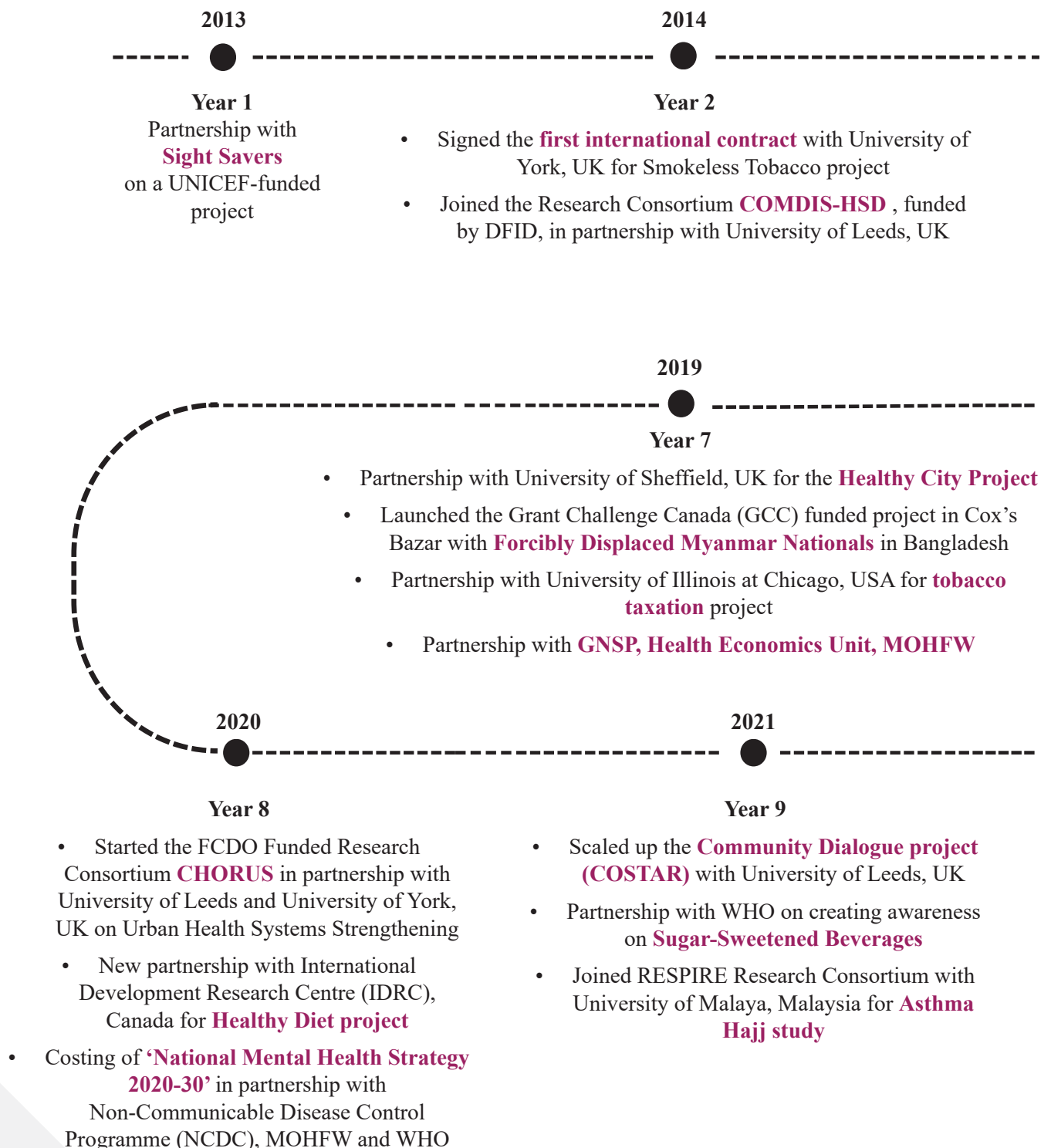
Our Collaborators



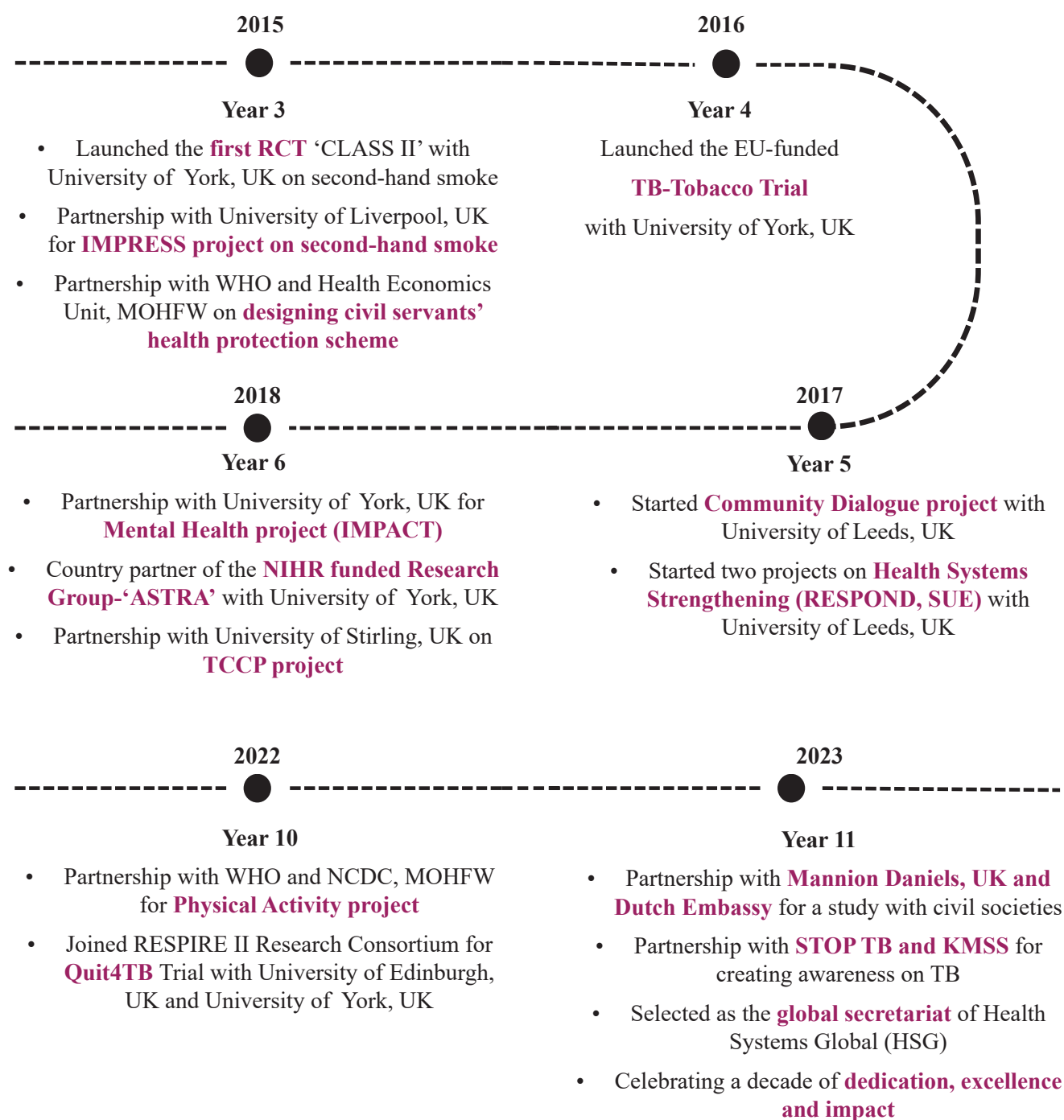
Our Funders



Journey



At a Glance



Our Publications in Reputed Journals

THE LANCET
Global Health



THE LANCET
Taylor & Francis Online



TID
Tobacco Induced Diseases



Tropical Medicine and Infectious Disease

BMC
Public Health

The Union
PUBLIC HEALTH ACTION

NIH > **NLM**

npj | primary care respiratory medicine

NICOTINE & TOBACCO RESEARCH

BMC
International Journal of Mental Health Systems

PLOS ONE

ADDICTION

Cambridge Prisms: Global Mental Health

BMC
International Journal of Mental Health Systems

The International Journal of Tuberculosis and Lung Disease (IJTLD)

Trials

International Journal of *Environmental Research and Public Health*

BMJ Open

Europe PMC

frontiers
in Psychiatry

BMC
Health Services Research

BMJ Global Health
Part of Springer Nature

BJPsych open





SELECTED STUDIES ON NON-COMMUNICABLE DISEASE



Children Learning About Second-Hand Smoke (CLASS-III): A Cluster Randomised Controlled Trial of a School-Based Smoke Free Intervention



Children Learning About Second-hand Smoke (CLASS-III) is an ongoing multinational cRCT project of ARK Foundation in collaboration with University of York, United Kingdom. The project aims to assess the effectiveness and cost-effectiveness of school-based Smoke-Free Intervention (SFI) in reducing children's exposure to second-hand smoking (SHS) and the frequency and severity of respiratory symptoms. The project was initiated in 2010 to research the effects of SHS on children. In the second phase, the project discovered that 95% of children had nicotine in their body. Currently, the project is in its third phase and conducted in a larger radius to provide a better understanding of the scenario, which explains the project name (CLASS-III).

For the study, a two-arm cluster randomised controlled-trial is being conducted in 34 randomly selected schools in Dhaka, where 1383 children are recruited. Half of the schools are assigned to the intervention arm, receiving SFI, while the other half is continuing with usual education. The primary outcome of the study is a change in salivary cotinine, a highly sensitive and specific biomarker of SHS exposure, which is again measured at month three. Secondary outcomes included frequency and severity of respiratory symptoms, healthcare contacts, school absenteeism, smoking uptake, and quality of life which is also checked in the follow up activity of month 3, month 6 and month 12 including baseline. Additionally, an economic and process evaluation is also being conducted.

Key Publication:

- **Huque R**, Siddiqi K, Khokhar M, Jackson C, Kanaan M, Hewitt C, Kellar I, Welch C, Parrott S, Mishu MP, Sheikh A. Children Learning About Secondhand Smoke (CLASS III): a protocol for a cluster randomised controlled trial of a school-based smoke-free intervention in Bangladesh and Pakistan. *BMJ open*. 2023 Jul 1;13(7):e068620.

Funding Agency: Medical Research Council (MRC)

Sponsor: University of York, UK

Duration: December, 2019 - July, 2024



Intervention of CLASS-III in the schools of Dhaka



Saliva test



Data Collection through TAB



*Principal Investigator Professor Dr. Kamran Siddiqi
visiting schools to observe first follow up*



Teachers Training

NIHR Global Health Research Unit on Respiratory Health (RESPIRE)



RESPIRE is a Global Health Research Unit focusing on respiratory health in Asia. The RESPIRE team includes partners from Bangladesh, Bhutan, India, Indonesia, Malaysia Pakistan, Sri Lanka and the United Kingdom.

ARK Foundation is a partner of RESPIRE and conducting Quit 4 TB Trial (see below) under Programme 3 of RESPIRE: Preventable Risk Factors. This programme of work focuses on the primary prevention of risk factors for respiratory conditions - including tobacco smoking and exposure to poor air quality - which are estimated to underlie many million deaths globally each year.



Prof. Shah Monir Hossain, ex DG, MoHFW, BD, joined a meeting with us for the study QUIT4TB Trial

A mHealth intervention (mTB-Tobacco) for smoking cessation in people with tuberculosis: a two-stage adaptive design, randomised trial (Quit 4 TB Trial)

Tuberculosis (TB) affects >10 million people every year and approx. 1.5 million die as a result. Smoking increases the chances of acquiring TB infection and TB disease by two- and three-folds, respectively. Compared to non-smokers, TB patients who smoke are more likely to have severe forms of clinical presentation, poor bacteriological and clinical responses to treatment(s), and high rates of treatment failure. The strong association between smoking and TB has led to increasing recognition of the need for evidence-based smoking cessation approaches and increasing policy support to help TB patients quit smoking.

Quit 4 TB Trial project aims to assess in people with TB who smoke daily and check the effectiveness and cost effectiveness of mTB-Tobacco in achieving continuous abstinence for at least six months and also assess the effectiveness and cost effectiveness of mTB-Tobacco in enhancing TB treatment adherence and improving clinical outcomes. We will conduct a multi-center, cluster randomised, controlled trial consisting of four phases. Phase 1 involves consultation with Patients and Public Involvement (PPI) groups about the study processes. PPI members will also review and provide feedback on the participant facing materials. Phase 2 is the pilot study. In Phase 3 (superiority trial), which will last for 12 months (6 months recruitments and 6 months follow ups), we will compare mTB-Tobacco (intervention A) with usual care (control). In Phase 4 (non-inferiority trial), which will last for another 12 months (6 months recruitment and 6 months follow ups), we will compare mTB-Tobacco (intervention A) with face-to-face behavioural support (intervention B).

The primary endpoint will be biochemically verified continuous abstinence at 6 months post randomization. Abstinence is defined as self-report of not having used more than 5 cigarettes, bidis, water pipe sessions since the quit date, verified biochemically by a breath carbon monoxide (CO) reading of less than 10 ppm at month 6. Secondary outcomes will include Point abstinence, defined as a self-report of not using tobacco in the previous 7 days, assessed at week 9 and month 6, Adherence to TB Treatment, TB Programme outcomes, Cured, Completed treatment, Treatment failure, Defaulted, Died and Relapse cases.

Funding Agency: National Institute for Health Research (NIHR), UK

Sponsor: University of Edinburgh, UK

Duration: September, 2022 - June, 2027



Dr. Rumana Huque is presenting the research study "Quit4TB Trial" in the Annual Scientific Meeting of RESPIRE 2023 in Jakarta, Indonesia.



Patient and Public Involvement (PPI) Forum meeting on intervention (mTB-Tobacco) messages for Quit4TB trial

Team Meeting & Training: The Quit4TB trial team is preparing empower our research assistants with the knowledge and skills they need, starting with training on the REDCap mobile app.



Piloting Session : The Quit4Tb trial team were conducting their their piloting session in Savar and Dhamrai

National Situation Analysis on Policy and Programmes Promoting Physical Activity in Bangladesh (SAT)

The main objective of this project was to identify the barriers and facilitators of physical activities to reach Global Action Plan on the prevention of NCDs in Bangladesh. The situation analysis also attempted to provide an overall view of the current scenario regarding the presence of physical activity as a standalone action area or as a part of other policies, frameworks or guidelines in the country.

The study was completed by following qualitative research methods: desk reviews, key informant interviews (KII), group consultative meetings, and validation workshops. At first, KIIs were conducted to get the initial information and topics for further probing. A series of KIIs and several small group consultative meetings were conducted in the first phase of data collection. After that, a comprehensive examination of all the policies, strategic frameworks, action plans, reports, laws, and legislation pertinent to the promotion of physical activity in Bangladesh was carried out through the desk review method. After gathering and evaluating the relevant information, all the data were combined analysed and then synthesised.

The study found that physical activity as a means of promoting physical fitness, a healthy and fit lifestyle, and overall good health has not gotten the necessary importance in Bangladesh as it should have. While there is a lack of awareness among the people about its significance and usefulness, there is also a lack of national initiatives to remedy that. There is no policy or guideline in the country that specifically promotes physical activity. Though it has come up as part of various other policies and strategies, it did not receive enough emphasis in national plans and programmes.

Funding Agency: World Health Organization (WHO)

Partner Organisation: Non-Communicable Disease Control (NCDC) Programme, Directorate General of Health Services, Ministry of Health and Family Welfare

Duration: April, 2022 - September, 2022

Potential Determinants in Health Sector Influencing Health Care Expenditure of the Households: A Mixed-Methods Study in Bangladesh

This study will identify the key drivers of health care expenditure of households in Bangladesh, and explore how the health system barriers and the health care seeking behaviour of the people influence access to and utilisation of health care, thereby influence the health care expenditure of the households.

The findings of the study will help the policy makers to decide strengthening health system, ensuring availability of quality health care, utilisation of basic health facilities, strengthening preventive and promotive care, availability of quality Essential Service Package (ESP), essential drugs and diagnostics and influencing health care seeking behaviour to reduce health care expenditure.

Funding Agency: Non-Communicable Disease Control (NCDC) Programme, Directorate General of Health Services, Ministry of Health and Family Welfare

Duration: March - June, 2023



Data Enumerators Training

Addressing Smokeless Tobacco and Building Research Capacity in South Asia (ASTRA)



ASTRA is a world-class, international and interdisciplinary group, aiming to reduce the substantial burden of disease caused by smokeless tobacco. Smokeless tobacco is responsible for thousands of deaths per year, but has so far been neglected in policy and research.

ASTRA's multi-country research teams carried out policy research and developed interventions to address the problems caused by smokeless tobacco use in South Asia. The study focused on Bangladesh, India and Pakistan, where 80% of the world's 300 million smokeless tobacco users live, and where the most harmful types of smokeless tobacco are favoured. The NIHR website has featured the work of the ASTRA project. The NIHR website showcases the achievements, challenges, and impact of the ASTRA project and ARK Foundation on policy and practice. This is a great recognition of our work and a source of inspiration for others. You can read more from this link:

<https://www.nihr.ac.uk/documents/case-studies/reducing-harm-from-smokeless-tobacco-use-in-south-asia/30694>

Funding Agency: National Institute for Health Research (NIHR), UK

Sponsor: University of York, UK

Partner country: India, Pakistan

Duration: March, 2018 - June, 2021



Workshop on policies to address the use of smokeless tobacco in Bangladesh



Advisory Sessions

Key Publication:

- Mishu, M.P., Siddiqi, K., McNeill, A., Kanaan, M., Jackson, C., **Huque, R., Kanan, S., Abdullah, S.M., Fieroze, F.**, Garg, S. and Singh, M.M., 2022. Protocol for a feasibility study of longitudinal surveys to assess the impact of policies on tobacco use among school-going adolescents in South Asia. *F1000Research*, 9(1123), p.1123.
- Mishu, M.P., Siddiqi, K., McNeill, A., Kanaan, M., Jackson, C., **Huque, R., Kanan, S., Abdulla S.M., Fieroze, F.**, Garg, S. and Singh, M.M., 2020. Assessing the impact of tobacco control policies on smokeless tobacco uptake and use among secondary school students in South Asia: protocol for a feasibility study of conducting longitudinal surveys. *F1000Research*, 9.
- Siddiqui F, Croucher R, Ahmad F, Ahmed Z, Babu R, Bauld L, **Fieroze F, Huque R**, Kellar I, Kumar A, **Lina S** et al. Smokeless tobacco initiation, use, and cessation in South Asia: a qualitative assessment. *Nicotine and Tobacco Research*. 2021 Oct 1;23(10):1801-4..
- **Abdullah S M, Huque R**, Siddiqi K, Kanan M, **Huque S** et al. Non-compliant packaging and illicit smokeless tobacco in Bangladesh, India and Pakistan: findings of a pack analysis. *Tobacco Control*. 2021; <https://tobaccocontrol.bmj.com/content/early/2022/09/27/tc-2021-057228>
- **Huque R, Al Azdi Z**, Sheikh A, Ahluwalia J S, Mishu MP, Mehrotra R et al. Policy priorities for strengthening smokeless tobacco control in Bangladesh: A mixed-methods analysis. *Tobacco Induced Diseases*. 2021; 19.
- Khan Z, **Huque R**, Sheikh A, Readshaw A, Eckhardt J, Jackson C, Kanaan M, Iqbal R, Akhter Z, Garg S, Singh MM. Compliance of smokeless tobacco supply chain actors and products with tobacco control laws in Bangladesh, India and Pakistan: protocol for a multicentre sequential mixed-methods study. *BMJ open*. 2020 Jun 1;10(6):e036468.
- Arora M, Chugh A, Jain N, Mishu M, Boeckmann M, Dahanayake S, Eckhardt J, Forberger S, **Huque R**, Kanaan M, Khan Z. Global impact of tobacco control policies on smokeless tobacco use: a systematic review protocol. *BMJ open*. 2020 Dec 1;10(12):e042860.
- Chugh A, Arora M, Jain N, Vidyasagan A, Readshaw A, Sheikh A, Eckhardt J, Siddiqi K, Chopra M, Mishu MP, Kanaan M...**Huque R**...et al The global impact of tobacco control policies on smokeless tobacco use: a systematic review. *The Lancet Global Health*. 2023 Jun 1;11(6):e953-68.

Improving Outcomes in Mental and Physical Multimorbidity and Developing Research Capacity (IMPACT) in South Asia at the University of York



People with severe mental illness (SMI; i.e. schizophrenia, bipolar affective disorder and severe depression with psychosis) die on average 10-20 years earlier than the general population. Around 80% of deaths in people with SMI are due to preventable physical illnesses, most commonly cardio-metabolic diseases, respiratory disorders, and infectious diseases. Comorbidity of physical and mental illness is a major cause of global disease burden, affecting some of the poorest and most vulnerable people in low- and middle-income countries. The majority of evidence for these health inequalities has been generated in high-income countries, but a small number of studies from low- and middle-income countries (LMICs) also show a similar pattern of increased mortality for people with SMI. The IMPACT group was formed with the following aims:

- i. To improve health and reduce deaths associated with diabetes, heart and lung diseases in people with severe mental ill health by addressing the most common health risk behaviours.
- ii. To reduce depression and anxiety in people with chronic physical health conditions.

The study had a number of work packages. One of the work packages was 'Investigating Mental and Physical Comorbidity: Survey in people with severe mental illness in South Asia' (IMPACT-SMI study)

Primary aim of IMPACT SMI study is to determine the prevalence of physical disorders and lifestyle health-risk behaviours in people with SMI in South Asia.

Key findings

- Nine percent had diabetes, 16.1% hypertension, 36.8% were overweight or obese, and 46% had hypercholesterolemia.
- Most participants (84%) with diabetes, hypertension and hypercholesterolemia were previously undiagnosed; of those diagnosed only around half were receiving treatment.
- Fifty percent of men and 19.1% of women used tobacco;
- 59.3% and 84.1% did not meet WHO recommendations for physical activity and fruit and vegetable intake respectively.
- Compared with the general population (data from the WHO STEPS survey), people with SMI were more likely to have diabetes (Odds ratio (OR)=1.7), hypercholesterolemia (OR=2.5) and to be overweight or obese (OR=2.0) in the country. They were less likely to receive tobacco cessation (OR=0.11), and weight management (OR=0.48) advice than the general population.

Another study under IMPACT was **“Behavioural activation for depression in people with non-communicable disease in low- and middle-income countries in South Asia (BEACON)”**

The rising burden of depression and non-communicable disease multimorbidity is an increasing global challenge, largely neglected by healthcare services, particularly in low- and middle-income countries (LMIC). Coexistence of depression and chronic physical disease is common and worsens outcomes for both the mental and physical disorder.



BEACON ABU DHABI Workshop Participants

This project aimed to explore the acceptability and feasibility of integrating a brief depression intervention called Behavioural Activation (BA) into NCD services at healthcare facilities in two South Asian Countries. To achieve this aim, qualitative interviews were conducted among policy makers, health care workers and NCD patients. The interviews attempted to understand the NCD care delivery, ways that NCD patients experience distress, ways in which depressed in addressed within NCD care and the challenges and opportunities of integrating BA into usual NCD care.



Community Advisory Panel Meeting

Two Research Fellows from ARK Foundation, Dr. Deepa Barua and Mr. Asiful Haider Chowdhury joined a workshop on Behavioural Activation in Dubai in 2019, arranged by the IMPACT team.

Key Publications:

- Zavala GA, Prasad-Muliyala, K, Aslam F, **Barua D, Haidar A**, Hewitt C, **Huque R**, Mansoor S, Murthy P, Nizami AT, Siddiqi N, Sikander S, Siddiqi K, Bohnke JR, On behalf of the IMPACT team. Prevalence of physical health conditions and health risk behaviours in people with severe mental illness in South Asia: protocol for a cross-sectional study (IMPACT SMI survey). *BMJ Open* 2020;10:e037869. <https://doi.org/10.1136/bmjopen-2020-037869>
- Zavala, G., **Haidar Chowdhury, A.**, Prasad-Muliyala, K., Appuhamy, K., Aslam, F., **Huque, R.**, Khalid H., Murthy, P., Nizami, A.T., Rajan, S., Shiers, D., Siddiqi, N., Siddiqi, K., Boehnke, J.R. (2023). Prevalence of physical health conditions and health risk behaviours in people with severe mental illness in South Asia: Multi-country cross-sectional survey. *BJPsych Open*, 9(2), E43. <https://doi.org/10.1192/bjo.2023.12>
- Zavala GA, Todowede O, Mazumdar P, Aslam F, **Chowdhury AH**, Jarde A, Khalid H, Reddy S, Gilbody S, Siddiqi N et al (2022). Effectiveness of interventions to address obesity and health risk behaviours among people with severe mental illness in low- and middle-income countries (LMICs): a systematic review and meta analysis. *Global Mental Health* 9, 264–273. <https://doi.org/10.1017/gmh.2022.21>
- Wright J, Mazumdar P, **Barua D, Lina S**, Bibi H, Kanwal A, Mujeeb F, Naz Q, Safi R, Haq B, Rana, Nahar P, Jennings H, Sikander S, **Huque R**, Nizami A, Jackson C. Integrating depression care within NCD provision in Bangladesh and Pakistan: a qualitative study (2020) *International Journal of Mental Health Systems*, doi: 10.1186/s13033-020-00399-y
- Uphoff E, Pires M, Barbui C, **Barua D**, Churchill R, Cristofalo D, Ekers D, Fottrell E, Mazumdar P, Purgato M, Rana R, Wright J, Siddiqi N. Behavioural activation therapies for depression in adults with non-communicable diseases (Review). (2020) *Cochrane Database of Systematic Reviews*, doi: 10.1002/14651858.CD013461.pub2
- Uphoff E, Pires M, Barbui C, **Barua D**, Churchill R, Ekers D, Fottrell E, Mazumdar P, Purgato M, Rana R, Wright J, Siddiqi N. Behavioural activation therapies for depression in adults with non-communicable diseases (Protocol). (2019) *Cochrane Database of Systematic Reviews*, doi: 10.1002/14651858.CD013461

Funding Agency: National Institute for Health Research (NIHR), UK

Sponsor: University of York, UK

Duration: March, 2018 - June, 2022

Development of Guidelines on Physical Activity (PA) and Sedentary Behaviour in Bangladesh

The aim of this assignment is to adopt the WHO global guidelines to Bangladesh context and develop the guidelines on physical activity and sedentary behaviour. Based on the desk review and consultations with different stakeholders, the WHO guidelines on PA and sedentary behaviour will be adopted and tailored to fit into the Bangladesh context.

Funding Agency: World Health Organization (WHO)

Partner Organisation: Non-Communicable Disease Control (NCDC) Programme, Directorate General of Health Services, Ministry of Health and Family Welfare

Duration: September - December, 2023

Supporting the Economic Analysis and Mental Health Assessments of the Investment Case Study for Mental Health in Bangladesh (2022)

This study provides evidence for long-term economic, health and social benefits of investing in mental health. Firstly, it provides an assessment of the current mental health situation in Bangladesh, including challenges and opportunities for development of the mental health system. Secondly, it presents economic evidence of the attributable, avertable burden associated with a number of leading mental, neurological and substance use conditions. ARK Foundation supported the international team in estimating the intervention costs, health gains and economic benefits for clinical interventions for six leading mental health conditions (depression, anxiety, psychosis, bipolar disorder, epilepsy, and alcohol use disorder) and two population-based interventions (pesticide ban and universal school-based SEL intervention).

Key Publication:

- Chisholm D, Lee YY, Baral PP, Bhagwat S, Dombrovskiy V, Grafton D, Kontsevaya A, **Huque R**, Kalani Okware K, Kulikov A, Marahatta K. Cross-country analysis of national mental health investment case studies in sub-Saharan Africa and Central, South and South-East Asia. *Frontiers in Health Services*. 2023 Jul 18;3:1214885.

Funding Agency: World Health Organisation (WHO), SEARO

Partners: UNDP and National Institute of Mental Health (NIMH), Bangladesh

Duration: May, 2021 - April, 2022

Initiative to Make Bangladesh Railways Tobacco- Free (IMBRTF) Project: Baseline Survey Report

Initiative to Make Bangladesh Railways Tobacco Free (IMBRTF) is an endeavour by the Ministry of Railway (MoR) to make railway stations and trains tobacco and smoking free. Under this project, ARK Foundation conducted the baseline survey in 10 model stations with the aim to understand the overall scenario of the implementation of tobacco control laws in the railway stations of Bangladesh. The findings of the survey suggested that there was a need for stronger policy measures along with stricter implementation and monitoring mechanisms. Along with that, Bangladesh Railway can also undertake nationwide awareness campaigns which can protect passengers from the adverse health consequences of second-hand smoke (SHS).

Funding Agency: The Bloomberg Philanthropies

Sponsor: Ministry of Railway, Bangladesh

Duration: March – June, 2022

Investigating the Impact of COVID-19 and its Response on People with Severe Mental Illness and on Mental Health Service Provision in South Asia (IMPASS)



Severe mental illnesses (SMI) are chronic disorders (e.g. schizophrenia, bipolar disorder), which may cause impairment in ability to engage in functional and occupational activities. SMI lowers life expectancy by approximately 10-20 years due to pernicious mix of physical disorders, poor healthcare access and higher susceptibility to complications. The Covid-19 pandemic has greatly affected people's lives and access to healthcare in low- and middle-income countries. Given these vulnerabilities, people with SMI are likely to be disproportionately at risk of the adverse impacts of the pandemic, as are mental health services. They may also be at higher risk of contracting Covid-19 as may not be able to engage with infection control measures. Hence aim of IMPASS study to investigate and help mitigate the impact of the Covid-19 pandemic and its response (e.g. lockdown and social distancing) on people with SMI and on mental health service provision in Bangladesh and Pakistan.



Stakeholder Workshop Bangladesh

Key findings

- Unvaccinated and vaccine hesitancy rates have been decreased over time but inequality persists in terms of various socioeconomic indicators, attitudes towards COVID-19 vaccine, tested for COVID-19 or not.
- Restrictions imposed by Government had a huge impact on employment and on social isolation. People with SMI suffered economic hardships and food insecurity during the early stage of COVID-19, which gradually improved.
- The proportion of SMI people reporting difficulty in obtaining medicines and seeing health care professionals is concerningly high.

Key Publication:

- Rajan S, Paton LW, **Chowdhury AH**, Zavala GA, Aslam F, **Huque R**, Khalid H, Murthy P, Nizami AT, Prasad Mulyala K, Shiers D, Siddiqi N and Boehnke JR (2022) Knowledge and Response to the COVID-19 Pandemic in People With Severe Mental Illness in Bangladesh and Pakistan: A Cross-Sectional Survey. *Front. Psychiatry, Sec. Public Mental Health*, Volume 13 – 2022, 14 February 2022. <https://www.frontiersin.org/articles/10.3389/fpsy.2022.785059/full>

Funding Agency: Medical Research Council (MRC-UKRI), UK

Sponsor: University of York, UK

Duration: September 2021 - March 2023

Bangladesh Asthma- Hajj Study

The Hajj is a massive pilgrimage that occurs once a year, involving two to three million individuals from more than 180 countries. Every year, around 120,000 pilgrims from Bangladesh perform the Hajj. One of the top causes of hospitalisation during the Hajj is acute asthma and its complications. One in five pilgrims with previously diagnosed asthma present with an unscheduled attendance or hospitalisation during the Hajj.

All Hajj pilgrims attend a medical examination about three to four months before the pilgrimage at various centres located nationwide. This offers an opportunity to intervene, with proper assessment and management.

Building on an initial study in Malaysia, this project is being undertaken in collaboration with the ARK Foundation in Bangladesh. This study will focus on the current pre-Hajj medical check-up services and their management process in Bangladesh, and whether they provide an opportunity to manage the risk of asthma issues among Hajj pilgrims. Limited research has been done on this issue in Bangladesh, and context-specific research is required to understand the public health challenges associated with Hajj and the existing barriers and opportunities in integrating any intervention.

Funding Agency: National Institute for Health Research (NIHR), UK

Sponsor: University of Malaya, Malaysia

Duration: March, 2021 – September, 2022

Cigarette Price Elasticity and Tobacco Taxation in Bangladesh

The project had two specific aims. First, it intended to estimate the cigarette price elasticity for Bangladesh using Global Adult Tobacco Survey (GATS) data. Second, it intended to simulate the potential revenue loss incurred by the government of Bangladesh for “Brand Repositioning” by the tobacco industry. The study was designed as secondary research and performed econometric modelling for the estimation of the price elasticity of cigarettes. For analysing the brand repositioning and its implication on revenue, World Health Organization (WHO) Tobacco Tax Simulation Model (TaXSiM) was used. Under this project ARK Foundation collaborated with WHO and National Board of Revenue (NBR), Bangladesh to access the data. The total price elasticity of cigarette was estimated as -0.71 (prevalence elasticity as -0.67 and intensity elasticity as -0.04). This implies that a 10 percent increase in the price of each cigarette stick would reduce the overall cigarette demand by 7.1 percent (smoking prevalence and smoking intensity would go down by 6.7 percent and 0.4 percent, respectively). The brand repositioning work estimated that the government revenue gap due to British American Tobacco (BAT’s) introduction of a new low-tier brand in FY 2019-20 was around 2.73 billion to 9.84 billion Bangladeshi taka.



Meeting with Prof. Frank J Chaloupka from the University of Illinois at Chicago

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Key Publication:

- **Huque R, Abdullah SM, Hossain MN, and Nargis N.** Price elasticity of cigarette smoking in Bangladesh: evidence from the Global Adult Tobacco Surveys (GATS). *Tob Control*. 2023. doi:10.1136/ tc-2022-057668.

Funding Agency: Bloomberg Philanthropies

Sponsor: University of Illinois at Chicago’s (UIC), USA Institute for Health Research and Policy

Duration: January, 2019 - December, 2021

Developing and Evaluating an Adapted Behavioural Activation Intervention for People with Depression and Diabetes in South Asia (DiaDeM)



The aim of this study is to develop and test a culturally appropriate approach to the recognition and treatment of depression in people with diabetes based on Behavioural Activation (BA). This 4-year programme will develop a culturally relevant, scalable intervention delivered by non-specialists, integrated within diabetes care (DiaDeM); use decision modelling and value of information analysis to inform the design of a trial of DiaDeM; test the feasibility of DiaDeM, and evaluate the clinical and cost-effectiveness of DiaDeM versus optimised usual care. ARK Foundation is working with national and international partners in DiaDeM programme, and is leading the community engagement work package in the programme.

ARK Foundation also formed Health Economics Research Network (HERN) in partnership with Centre for Health Economics (CHE), University of York, UK, supported by DiaDeM.

Funding Agency: National Institute for Health Research (NIHR), UK

Sponsor: University of York, UK

Partner Organisations: University of York, Diabetic Association of Bangladesh (BADAS), IoP

Duration: September, 2020 – August, 2024



HERN Inauguration Ceremony in Bangladesh



Community Advisory Panel Meeting in Sylhet

Costing, Copy Editing and Designing the ‘National Mental Health Strategic Plan 2020-2030’

The National Mental Health Strategic Plan 2020-2030 was developed by the Non-Communicable Diseases Control (NCDC) Programme, Ministry of Health and Family Welfare, Bangladesh. ARK Foundation supported in copy editing and designing the ‘National Mental Health Strategic Plan 2020-2030’. We also carried out the costing of the Strategic Plan.

Funding Agency: World Health Organisation

Partner Organisations: Non-Communicable Diseases Control (NCDC) Programme, National Institute of Mental Health, Shuchona Foundation

Duration: July, 2020 - June, 2021

Muslim Communities Learning about Second-Hand Smoke in Bangladesh (MCLASS II): An Effectiveness-Implementation Hybrid Study

Muslim Communities Learning About Second-hand Smoke (MCLASS-II) in Bangladesh was an effectiveness-implementation hybrid study. Its overall aim was to reduce the burden of disease due to second-hand smoke in low- and middle-income countries by discovering innovative community-based approaches to behaviour change.

It was a three-arm pilot cluster randomised controlled trial of a mosque-based intervention 'Smoke Free Homes' with an embedded preliminary health economic analysis and qualitative evaluation. It assessed the feasibility and acceptability of introducing an intervention using imams as a change agent, thereby helping policy makers adapt tobacco cessation strategies to the local context.



MCLASS II field monitoring, Mirpur

Key Publications:

- N Mdege, C Fairhurst, Ferdous T, Hewitt C, Huque R, C Jackson, I Kellar,..et al. Muslim Communities Learning About Second-hand Smoke in Bangladesh (MCLASS II): study protocol for a cluster randomised controlled trial of a community-based smoke-free homes.
- Ferdous T, Siddiqi K, Semple S, Fairhurst C, Dobson R, Mdege N, Marshall AM, Abdullah SM, Huque R. Smoking behaviours and indoor air quality: a comparative analysis of smoking-permitted versus smoke-free homes in Dhaka, Bangladesh. *Tobacco Control*. 2022 May 1;31(3):444-51.
- Dobson R, Siddiqi K, Ferdous T, Huque R, Lesosky M, Balmes J, Semple S. Diurnal variability of fine-particulate pollution concentrations: data from 14 low-and middle-income countries. *The International Journal of Tuberculosis and Lung Disease*. 2021 Mar 1;25(3):206-14.

Funding Agency: Medical Research Council (MRC), UK

Sponsor: University of York, UK

Duration: December, 2016 - November, 2019

Assessment of Health, Poverty and Financial Consequences of Smokeless Tobacco Consumption among Women in Bangladesh

General objective of the study is to assess the health, poverty, and financial consequences of smokeless tobacco consumption among women in Bangladesh. We carried out a cross-sectional survey using a multi stage sampling design, where 2,190 households were surveyed from 4 purposively selected divisions (Dhaka, Chittagong, Khulna and Rangpur). Female ST users and non-users were compared using health related quality of life (HRQoL) scores. Self-perceived Visual Analogue Scale (EQ-VAS) values and HRQoL scores were modelled for examining their association with ST use.

Funding Agency: Ministry of Health and Family Welfare (MOHFW)

Sponsor: Health Economics Unit (HEU), Health Services Division

Duration: July - December, 2021



Field data collectors training

Building Capacity for Applied Research to Reduce Tobacco-Related Harm in Low- and Middle-Income Countries (TCCP): A GCRF Growing Research Capacity Project



The overall aim of the Tobacco Control Capacity Programme (TCCP) was to improve research capacity in low- and middle-income countries (LMICs) to conduct high-quality studies that will generate evidence on how to reduce morbidity and mortality caused by tobacco use and to advance key development priorities. The programme has been funded until the end of 2021.



Stakeholder Engagement Meeting



Checking VAT token on cigarette packet

Key Publications:

- Dobbie F, Mdege N, Davidson F, Siddiqi K, Collin J, **Huque R**, ..., et al. Building capacity for applied research to reduce tobacco-related harm in low-and middle-income countries: the Tobacco Control Capacity Programme (TCCP). *Journal of Global Health Reports* 3
- **Abdullah SM**, Wagner-Rizvi T, **Huque R**, **Kanan S**, **Huque S**, Ralston R, Collin J. 'A contradiction between our state and the tobacco company': conflicts of interest and institutional constraints as barriers to implementing Article 5.3 in Bangladesh. *Tobacco Control*. 2022 Jun 1;31(Suppl 1):s33-8.

Funding Agency: Research Councils UK as part of the Global Challenges Research Fund

Sponsor: University of Stirling, UK

Duration: July, 2018 - December, 2021

End of Project Evaluation of “Quality Child Eye Health through Enhancing National Capacity on Pediatric Ophthalmology” Project

The purpose of the end of project evaluation was to establish the extent to which the project has been able to strengthen medical and non-medical human resource capacity of National Institute of Ophthalmology and Hospital (NIO&H) and Bangladesh Jatiya Andha Kalyan Somity(BJAKS) and how these effectively meet eye health needs of children in the target area.

Funding Agency: USAID

Sponsor: Sightsavers, Royal Commonwealth Society for the Blind (RCSB)

Duration: January -March, 2013

Children Learning About Second-hand Smoke (CLASS-II): A Pilot Randomised Controlled Trial

A report was published about CLASS-II Trial in popular Bengali Newspaper
 “The Daily Prothomalo (December 11, 2017)”

Children Learning About Second-hand Smoke (CLASS-II) was a two-arm pilot cluster randomised controlled trial funded by the Medical Research Council, UK. The project primarily aimed to establish the effectiveness of a school-based intervention, ‘Smoke Free Homes’, in reducing exposure of school children to second hand smoke. Its effect on frequency and severity of respiratory illness, healthcare contacts, school absenteeism, smoking uptake and their lung function, quality of life and school performance were also studied.

CLASS II found that a school-based intervention has the potential to reduce children’s exposure to second-hand smoke. The trial provides key information to conduct a future definitive trial in this area of public health, which despite its importance has so far received little attention.

- Key Publications:**
- Shah S, Kanaan M, **Huque R**, Sheikh A, Dogar O et al. Secondhand smoke exposure in primary school children: a survey in Dhaka, Bangladesh. *Nicotine and tobacco research* 21 (4), 416-423
 - Siddiqi K, **Huque R**, Kanaan M, Ahmed F, **Ferdous T** et al. Children learning about Secondhand smoke (class II): a pilot cluster randomized controlled trial. *Nicotine and tobacco research* 21 (5), 670-677
 - **Huque R**, Dogar O, Cameron I, Thomson H, Amos A, Siddiqi K. Children learning about second-hand smoking: A feasibility cluster randomized controlled trial. *Nicotine & Tobacco Research* 17 (12), 1465-1472
 - K Siddiqi, **R Huque**, C Jackson, S Parrott, O Dogar, S Shah, H Thomson. Children Learning About Secondhand Smoke (CLASS II): protocol of a pilot cluster randomised controlled trial *BMJ open* 5 (8), e008749
 - Bay JL, Hipkins R, Siddiqi K, **Huque R**, Dixon R, Shirley D, Tairea K, Yaqona D, Mason-Jones A, Vickers MH. School-based primary NCD risk reduction: education and public health perspectives. *Health promotion international*. 2017 Apr 1;32(2):369-79.

Funding Agency: Medical Research Council (MRC)

Sponsor: University of York, UK

Duration: April, 2015 – March, 2017

Tobacco Cessation within TB Programmes: A ‘Real World’ Solution for Countries with Dual Burden of Disease



The TB and Tobacco project aimed to investigate ways in which interventions designed to encourage people to stop smoking can be integrated into tuberculosis (TB) control programmes. It aimed to improve the health and longevity of patients suffering from TB, as well as decreasing the number of people who suffer from tobacco-related diseases. The project was conducted across three South Asian Countries.

The project comprised of several work packages, each linked to the next. The initial work packages focused on developing behavioural change communication (BCC) materials composed of a flipbook, leaflets, and posters. The flipbooks were created to help health care providers, more specifically known as Directly Observed Treatment Short course (DOTS) providers to counsel TB patients about adherence to drugs and compliance with their treatment. Additionally, these flipbooks provided steps to help TB patients quit smoking (if they were smokers) and additionally suggested ways in which one could overcome withdrawal symptoms. These were presented in a concise form in leaflets, which were distributed to TB patients. Lastly, the posters mentioned what a person would gain at each time point, after quitting tobacco use.



Training on the delivery of TB & Tobacco Behavioral Support Intervention



TLCA was counseling TB patient through showing Flipbook

Additionally, the project also evaluated the effectiveness of a drug called “Cytisine” (drug to help quit smoking) through a randomised controlled trial. The trial was conducted across 17 Upazila Health Complexes, among 1528 smokers who were Category 1 Pulmonary TB patients.

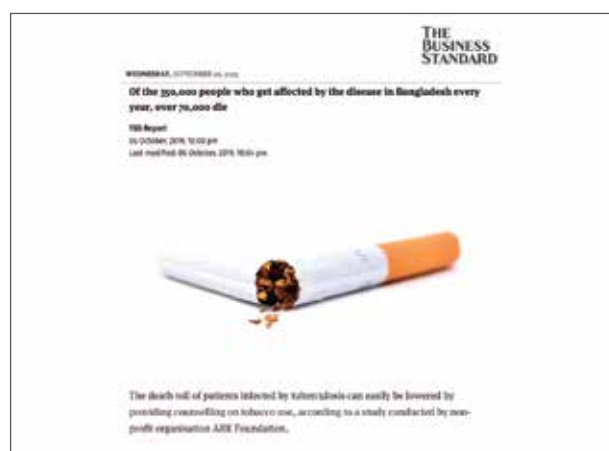
Key Publications:

- Li J, Parrott S, Keding A, Dogar O, Gabe R, Marshall AM, **Huque R, Barua D**, Fatima R, Khan A, Zahid R. Cost-utility of cytisine for smoking cessation over and above behavioural support in people with newly diagnosed pulmonary tuberculosis: an economic evaluation of a multicentre randomised controlled trial (2022) *BMJ Open*
- Marshall AM, **Barua D**, Mitchell A, Keding A, **Huque R**, Khan A, Zahid R, Dogar O, Siddiqi K. Smoking prevalence among tuberculosis patients: a cross-sectional study in Bangladesh and Pakistan (2020) *Tobacco Induced Diseases*, doi: 10.18332/tid/125452
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Policy advocacy Seminar



The Business Standard covered our TB & TB tobacco Study news

Funding Agency: European Union (EU)

Sponsor: University of York, UK

Partner Organisations: HERD International Pvt. Ltd., Nepal; National TB Programme, Islamabad, Pakistan; The Initiative, Islamabad, Pakistan; Heinrich-Heine University, Düsseldorf, Germany; the University of Edinburgh, UK; the University of Leeds, UK and the General University Hospital, Prague, Czech Republic.

Duration: July, 2015 - December, 2018

Integrating a Diabetes and Hypertension Case Management Package within Primary Health Care: A Mixed Methods Feasibility Study in Bangladesh-Under COMDIS-HSD (Communicable Disease-Health Service Delivery) Research Programme Consortium



We were the partner of the ‘Communicable Disease-Health Service Delivery (COMDIS-HSD)’ Research Consortium, led by University of Leeds, UK. This was one of the four studies that we conducted under COMDIS-HSD. Our aim was to develop and support implementation of a diabetes and hypertension case management package, and assess its appropriateness, feasibility and acceptability in two NCD clinics within two primary-care centres in Bangladesh. We found that a clinical guide, skill-based training and recording package can be implemented in routine primary care and can lead to appropriate management of around half of diabetic and hypertensive patients in a low-income country. However, considerable health systems challenges must be addressed before more patients can be managed appropriately.

Key Publications:

- **Huque R**, Nasreen S, Ahmed F, Hicks JP, Walley J, Newell J, Elsey H. Integrating a diabetes and hypertension case management package within primary health care: a mixed methods feasibility study in Bangladesh. *BMC Health Services Research* 18 (1), 1-10

Funding Agency: Department for International Development (DFID), UK

Sponsor: University of Leeds, UK

Partners: HERD International Nepal

Duration: July, 2014 – December, 2016



Technical Working Group meeting to develop IMCI Job Aide for Community Health Care Providers (CHCP), 2014



Technical Working Group meeting to develop IMCI Job Aide for Community Health Care Providers (CHCP)

Social Determinants of Health in the Prevention of Non-Communicable Diseases (NCDs).

This study explored the wider social determinants of health that influence NCD in Bangladesh. A multistage random sampling was used to survey 1370 respondents from 1000 households in Chittagong, Dhaka, Rajshahi and Sylhet division. The study suggested to promote healthy diet with high fruit and vegetable content as a major lifestyle choice, promoting regular exercise among all age groups, creating awareness among people about lifestyle change, improving social norms, reducing harmful practices and encouraging vement ('self-management'). Multisectoral collaboration is required to make exercise more accessible to people. Education institutes, businesses and local authorities need to work closely to identify ways to provide opportunities for people to do physical exercise. Legislative support is also required to make pathways and parks, especially in urban areas. Moreover, regular screening and treatment of NCD, especially diabetes and hypertension, need to be implemented in routine primary care. However, considerable health systems challenges, such as, training of staff, supply of medicine, and keeping patient record and follow up, must be addressed to manage patients appropriately at primary care level.

Funding Agency: Ministry of Health and Family Welfare (MOHFW)

Sponsor: Health Economics Unit (HEU), Health Services Division (HSD)

Duration: July – December, 2017

Fiscal and Regulatory Mechanisms for Promoting Healthy Diets in Bangladesh

Diet-related non-communicable diseases (NCDs) continue to rise in Bangladesh, disproportionately affecting women, children, and the poor. The complex interaction of the fresh food supply chain, price drivers, competition from low-cost and low-nutrition products, and cultural influences affect access to consuming a healthy diet. This project aimed to review how fiscal and regulatory measures can be used to promote healthy diets and reduce NCD-related mortality and morbidity.



Meeting with Dr Anindya Chatterjee, Regional Director of IDRC at ARK Foundation

The research team used four complementary methods to understand existing systems and policies that promote or hinder access to healthy diets: policy mapping, supply chain analysis, in-depth interviews, and stakeholder engagement. The researchers worked with a wide range of stakeholders to identify the policy gaps in promoting healthy diets and explore relevant barriers and facilitators to implement such policies.

Key Publications:

- **Azad A K, Huque R.** The crowding-out effect of sugar-sweetened beverages (SSBs) on household expenditure patterns in Bangladesh. *BMC Public Health.* 2023. <https://doi.org/10.1186/s12889-023-16290-7>.
- **Hossain MN, Islam MS, Abdullah S M, Alam SM, Huque R.** Vegetables and fruits retailers in two urban areas of Bangladesh: Disruption due to COVID-19 and implications for NCDs. *Plos one.* 2023; 18 (1), e0280188 <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0280188>

Funding: International Development Research Centre (IDRC)

Duration: January 2020 - June 2023

Evaluation of Tobacco Dependence Measures in South Asian Smokeless Tobacco Users

The study aimed to evaluate psychometric properties of the Oklahoma Scale of Smokeless Tobacco Dependence among Bangladeshi smokeless tobacco users, and to identify underlying constructs and processes that explains dependence among smokeless tobacco users.

Key Publications:

- **Huque R**, Zaman MM, Huq SM and Sinha D . Smokeless tobacco and public health in Bangladesh. *Indian J Public Health*. 2017;61:S18–24.
- **Huque R**, Shah S, Mushtaq N, Siddiqi K. Determinants of salivary cotinine among smokeless tobacco users: a cross-sectional survey in Bangladesh. *PloS one*. 2016; 11 (8), e0160211

Funding Agency: Leeds City Council, UK

Sponsor: University of York, UK

Duration: February, 2014 – December, 2014

Social Determinants of Health and its Relationship with Clinical and Economic Outcomes in People with Type 2 Diabetes: An Intervention Study in Bangladesh

Bangladesh recognizes noncommunicable diseases (NCDs) as a major public health threat. Type 2 diabetes (T2DM), hypertension (HTN), and coronary artery diseases (CAD) are the leading causes of morbidity and mortality in the country. T2DM is now considered a significant public health burden in Bangladesh.

Also, social determinants of health (SDOH) are playing a vital role in the health and economic outcome of people with T2DM. Therefore, exploring the relationship and measuring the association between SDOH and people with T2DM is important. Addressing SDOH for better health and economic outcomes of people with T2DM in Bangladesh is the demand of time. Prevention of T2DM and reduction of the burden of the disease with the introduction of a model health package is an important public health measure as evidenced from other countries.

The aim of the study is to contribute to prevent and reduce the burden of diabetes in the country by developing a model health package addressing the social determinants of health (SDOH) of people with type 2 diabetes (T2DM).

Funding Agency: Ministry of Health and Family Welfare, Bangladesh (MoHFW)

Partner Organisation: Diabetic Association of Bangladesh (BADAS)

Duration: 2023-2025

Other Key Publications on NCD:

- **Huque R**, Zaman MM, Huq SM and Sinha D . Smokeless tobacco and public health in Bangladesh. *Indian J Public Health*. 2017;61:S18–24.
- Khan A, **Huque R**, Shah SK, Kaur J, Baral S, Gupta PC et al. Smokeless tobacco control policies in South Asia: a gap analysis and recommendations. *Nicotine & Tobacco Research*. 2014; 16 (6), 890-894
- Siddiqi K, Scammell K, **Huque R**, Khan A, Baral S, Ali S, Watt I. Smokeless tobacco supply chain in South Asia: a comparative analysis using the WHO Framework Convention on Tobacco Control. *Nicotine & Tobacco Research*. 2015; 18 (4), 424-430
- **Huque R** and Siddiqi K (2021). Smoke-free homes: The final frontier. *Tobacco Prevention & Cessation*. 2021; 7: 1-3. DOI: 10.18332/tpc/142772



SELECTED STUDIES ON COMMUNICABLE DISEASE



Community Solution to Antimicrobial Resistance (COSTAR)



Antimicrobial resistance (AMR) is a growing threat to global health, food sustainability, and socio-economic development. It is estimated that AMR infections cause approximately 700,000 human deaths each year globally and this figure is set to rise to 10 million by 2050 if no action is taken. Multi-sectoral action that addresses human and animal health, agriculture, and the environment, through a One Health approach, is essential to address the profound implications of AMR.

To address this issue, the COSTAR project is being implemented in both Bangladesh and Nepal. The aim of the project is to co-create, implement and robustly evaluate an innovative intervention that addresses the contextual drivers of AMR through a One Health approach to community engagement and education/awareness raising, and build an infrastructure for knowledge exchange, which ultimately impacts on national and global policy.

In Cumilla, we are implementing a cluster randomised controlled trial – the gold standard method of assessing the effectiveness of community-level interventions, (population = 6,212,216, 2022 census), using 25 intervention and 25 control communities (catchment area of community clinic), to generate strongly generalizable findings. All outcomes are going to be collected through household survey twelve months after CDA implementation begins to allow enough time for CDs to affect community member's knowledge, attitude and practice. The CDA included multisectoral and multi layered training involving different stakeholders. Around 10 master trainers and 20 trainers from Ministry of Health and Family Welfare and Ministry of



COSTAR toolkit is being Handed over to LD and DLD of CDC, DGHS

Fisheries and Livestock and around 300 volunteers and supervisors were trained rigorously who are the part of the community in where they are conducting the community dialogues twice a month. Male and female facilitators are conducting separate dialogues with their own community people to identify the existing health issues in the community, exploring the reason behind it and agreeing on locally available resource-based solutions.

Under the umbrella of COSTAR, Participatory video (PV) is being piloted for the first time in Bangladesh with both urban and rural communities to address the potential drivers of AMR. Within PV approach, a small group of people from each community is introduced to the issue of AMR and to international guidance on how to prevent it through a series of workshops. They are simultaneously trained in the principles of film production. The group then uses its knowledge about AMR to explore with their community, through a series of short films that they collectively produce, what they consider to be the barriers to following the international guidance, and what they and ultimately policy makers, can do to overcome these. A similar approach is applied in an urban setting for the above purpose.

Funding Agency: UKRI-GCRF collective fund

Sponsor: University of Leeds, UK

Partner Organizations: University of Leeds, Malaria Consortium, Chattogram Veterinary and Animal Sciences University, University of Liverpool, University of Western Australia

Duration: January 2021 to March 2024



COSTAR UK team observing Community Dialogue in Cumilla



MoU signing ceremony between ARK Foundation and Communicable Disease Control (CDC), DGHS, MoHFW



Training of Facilitators and Supervisors, Brahmanpara, Cumilla



Training of Trainers of COSTAR with MODC and ULO and LEO in Cumilla



COSTAR Toolkit: Flip Book Discussion Guide and Score Book



Participatory Video Workshop

Community Engagement for Tackling Anti-microbial Resistance (CE4AMR)



Antimicrobial resistance (AMR) is a global health concern that requires a multidisciplinary approach. Community engagement (CE) has been recognized as a crucial strategy for addressing AMR, as it involves the active participation of community stakeholders in identifying and implementing sustainable interventions. However, there is a need to understand how CE approaches are currently utilised in One Health AMR research.

This study aims to explore the role of community engagement in addressing AMR within a One Health context. The study recognizes the importance of involving communities in addressing AMR, as they play a significant role in the development and spread of antimicrobial resistance. By understanding the current practices and challenges of community engagement in AMR research, the study seeks to identify opportunities for improving interventions and developing tailored solutions.

The study utilised a cluster approach, involving six existing AMR research projects based in Bangladesh, Ghana, India, Nepal, and Vietnam. The projects had co-investigators (Co-Is) based in each country and across the UK. The research questions were co-designed and answered through a participatory process involving the project teams. The answers were synthesised using an inductive thematic approach.

The study found that community engagement is essential for addressing AMR effectively. The definition of community engagement was co-developed, emphasising the importance of equitable partnerships and community-led interventions. The study highlighted the complexity of defining communities, as individuals belong to multiple communities simultaneously, which can change depending on the context. External stakeholders often define communities based on demographic, geographic, socio-cultural dynamics, and shared lived experiences. The study emphasised the need for a holistic approach that considers the interconnectedness of human and animal communities in addressing AMR.

In conclusion, community engagement is a vital strategy for tackling AMR within a One Health context. The study provides insights into the current practices and challenges of community engagement in AMR research. By understanding the diverse nature of communities and involving them in the development and implementation of interventions, tailored solutions can be created to address the drivers of AMR effectively.

Key Publication:

- Mitchell, J., Cooke, P., Ahorlu, C., Arjyal, A., Baral, S., Carter, L., Dasgupta, R., Fieroze, F., Fonseca-Braga, M., Huque, R. and Lewycka, S., 2022. Community engagement: The key to tackling Antimicrobial Resistance (AMR) across a One Health context?. *Global public health*, 17(11), pp.2647-2664.

Funding Agency: Global Challenge Research Fund (GCRF)

Sponsor: University of Leeds, UK

Partner Countries: India, Nepal, Ghana, Vietnam

Duration: 2020 to 2021

Community Dialogue for Preventing and Controlling Antibiotic Resistance in Bangladesh

The study aimed to develop and test a “community dialogue” approach for preventing and controlling antibiotic resistance in Bangladesh. The project had five objectives: to conduct research to inform the content of and processes for delivering community dialogues; to adapt the community dialogues approach to the setting; to pilot-test the approach in the catchment areas of five community clinics; to evaluate the feasibility of the pilot intervention in terms of the number of people it reaches, the extent to which it is delivered as intended, and whether or not it is acceptable to a range of stakeholders; and to engage with key stakeholders, such as policy makers, district health officials, community clinic staff and communities to ensure that the intervention is appropriate. We worked in Community Clinics in 21 villages in Comilla District and engaged 55 community volunteers from Community Group and Community Support Group to create awareness among people about appropriate use of antibiotics.

Key Publications:

- King R, Hicks J, Rassi C, Shafique M, **Barua D**, **Bhowmik P**, Das M, Elsey H, Questa K, **Fieroze F**, Hamade P. A process for developing a sustainable and scalable approach to community engagement: Community Dialogue Approach for addressing the drivers of antibiotic resistance in Bangladesh. (2020) BMC Public Health, doi: 10.1186/s12889-020-09033-5
- Questa K, Das M, King R, Everitt M, Rassi C, Cartwright C, **Ferdous T**, **Barua D**, Putnis N, Snell AC, **Huque R**. Community engagement interventions for communicable disease control in low-and lower-middle-income countries: evidence from a review of systematic reviews. (2020). International journal for equity in health, doi: 10.1186/s12939-020-01169-5

Funding Agency: UKRI-GCRF collective fund

Sponsor: University of Leeds, UK

Partner Organisations: University of Leeds, Malaria Consortium

Duration: January 2017 to June 2018



Community Dialogue with Local Community People in Daudkandi, Comilla



Training of facilitators of Community Dialogue Pilot in Comilla

Developing a Psycho-Social Support (PSS) Intervention for People with Multi-Drug Resistant Tuberculosis (MDR-TB) and Com-Morbid Depression in Bangladesh: A Feasibility Study

This study aimed to develop an acceptable and feasible psycho-social support (PSS) package that will be ready to embed within the existing National TB Control Programme (NTP) service delivery system in Bangladesh.

Our specific objectives were to assess the existing MDR-TB services, exploring the facilitators and barriers in the current service provision for mental health support; assess the prevalence of depression among MDR-TB patients using the depression module of the Patient Health questionnaire (PHQ-9); validate PHQ-9 in the Bangladesh context; identify whether depression is associated with cure rate; and develop tools, materials and guideline for a PSS package that is applicable to the Bangladesh MDR-TB programme context.

Key Publications:

- **Huque, R.**, Elsey, H., **Fieroze, F.**, Hicks, J.P., **Huque, S.**, Bhawmik, P., Walker, I. and Newell, J., 2020. "Death is a better option than being treated like this": a prevalence survey and qualitative study of depression among multi-drug resistant tuberculosis in-patients. *BMC Public Health*, 20(1), pp.1-13.
- IF Walker, SC Baral, X Wei, **Huque R**, A Khan, J Walley, JN Newell. Multidrug-resistant tuberculosis treatment programmes insufficiently consider comorbid mental disorders. *The International Journal of Tuberculosis and Lung Disease* 21 (6), 603-609

Funding Agency: FCDO, UK

Sponsor: University of Leeds, UK

Duration: January 2017 - December 2018

Antibiotic Practices Among Household Members and their Domestic Animals within Rural Communities in Comilla District, Bangladesh: A Cross-Sectional

Antibiotic resistance is a global public health threat that is driven by inappropriate antibiotic use. In low- and middle-income countries, such as Bangladesh, there is limited evidence on how rural households use antibiotics for themselves and their domestic animals.

The aim of the study is to understand the antibiotic practices of rural households in Cumilla district, Bangladesh, in relation to household members and their domestic animals. The study reported the results of a cross-sectional survey conducted in 2018, involving 682 female and 620 male household heads. The survey collected data on socio-demographic characteristics, knowledge and awareness of antibiotics, antibiotic use and sources, and antibiotic practices in domestic animals. The study found that only 48% of women and men had heard of antibiotics, and among those who were aware of antibiotics and the children of those women 70% reported having previously taken antibiotics. The study concludes that there is a need for context-adapted interventions at both the community level and the health systems level to reduce inappropriate antibiotic use among humans and domestic animals in rural Bangladesh. The study suggests that such interventions should include education and awareness campaigns, regulation and enforcement of antibiotic sales, and promotion of rational prescribing and dispensing practices.

Funding organization: MRC, UK

Sponsor organization: University of Leeds, UK.

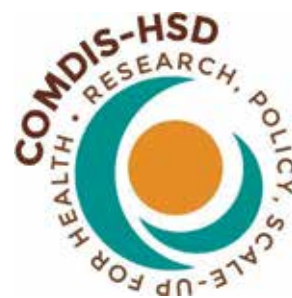
Duration: 2018-2019



SELECTED STUDIES ON REPRODUCTIVE, MATERNAL, NEONATAL CHILD and ADOLESCENT HEALTH



Assessing the Effectiveness of Using Public-Private Partnerships to Improve Family Planning Services in Bangladesh-Under COMDIS-HSD (Communicable Disease-Health Service Delivery) Research Programme Consortium



Under this study, a public-private partnership (PPP) was developed to help private medical practitioners (PMPs) implement a referral strategy between themselves and family planning centres. We assessed whether the PPP model was effective in increasing the use of long-acting reversible contraceptive methods (LARCMs) and acceptable to both public and private healthcare providers.

Our findings revealed the PPP model is acceptable. The uptake of LARCMs increased with the use of a systematic referral system, as well as when the PMPs were in regular contact with and/or had their clinics either in or near the health centres that provided the family planning services. PMPs were more likely to refer patients to family planning centres if they were sure that their incentives would be properly disbursed. Additionally, it was apparent that pharmacists and paramedics play an important role in motivating patients towards particular family planning methods. Communication between the PMPS and family planning centres is important to ensure continuous referral of patients for family planning services.

Key Publications:

- L Bates, **Huque R**, **Bhowmik P**, R King, H Elsey, J Newell, J Walley. Partnering with private providers to promote long-acting contraceptives in urban Bangladesh: a mixed-methods feasibility study. *International perspectives on sexual and reproductive health*. 2019: 45, 87-98

Funding Agency: FCDO, UK

Sponsor: University of Leeds, UK

Duration: March 2014 - December 2016



Training on Assessing Effectiveness of PPP to improve access to Family Planning Services



Developing Training Materials through a Participatory Approach

Developing a Contextualised Package of Care for Child Development (0-12 months) and Maternal Mental Health in the Forcefully Displaced Myanmar Nationals (FDMN) Refugee Camps

The early childhood period is the time when a child's brain develops at a rapid rate creating plenty of opportunities for children's learning and development. A child can have a good start in life when he/she grows up in a nurturing and stimulating environment that meets his/her essential needs such as nutrition, health, and safety, as well as the psychological, social, spiritual, and intellectual needs. Therefore, it is important to address children's needs holistically because the absence of one or more essential needs can lead to negative developmental outcomes for children. Each and every child has a right to Early Childhood Development (ECD). The United Nations Convention on the Rights of the Child Article 6 (Article 6, UNICEF) highlights that the child has "a right to live...and develop healthy" and that every child has "the right to a standard of living that is good enough to meet their physical and mental needs" (Article 27, UNICEF).



Training on Data Collection

As of February 2018, the United Nations estimates that almost 1 million Forcefully Displaced Myanmar Nationals (FDMN) moved into refugee settlements in Cox's Bazar, Bangladesh. More than 48,000 Rohingya infants were expected to be born in Bangladesh in 2018 and would be exposed to different diseases and malnutrition since birth. Comprehensive early childhood care provides a strong foundation for good health, growth, and success in education, according to global evidence.

Purpose: The aim of the study was to develop a contextualized and evaluate an intervention for community-based child development and maternal depression care in refugee camps.

Materials and Methods: The intervention materials (i.e. provider training and mother counseling) was contextualized and evaluated for delivering care in Bangladesh refugee setting. A cluster randomised controlled trial, process evaluation and costing study were conducted to assess the effectiveness (rather than efficacy) and feasibility of delivering a contextualized intervention in the refugee setting. This adaptation, through a locally constituted technical working group, took into account the technical, social, economic, and management support considerations for delivering child development and mental health care in a refugee camp setting. The care package included mainly: a) child brain development and nutrition counselling; and b) mother depression assessment and care. At the end, home-based measurement of the outcomes will be arranged/ conducted for all registered children and their mothers.

A total of 696 mother-child pairs in 22 clusters were recruited and randomly divided into equal number of intervention and control clusters. The mother-child pairs were registered in the trial when the new-born child was less than 6 weeks old; and were followed up, on quarterly basis, till the child was one year old i.e. when the outcome measurements for child development and maternal mental health were done.

Key Publication:

- **AHME Hussain, Azdi Z Al, K Islam, ANME Kabir, Huque R.** Prevalence of eye problems among young infants of Rohingya refugee camps: Findings from a cross-sectional survey. *Tropical Medicine and Infectious Disease.* 2020; 5 (1), 21

Funding Agency: Grand Challenge Canada (GCC)

Duration: July, 2018 - June, 2020

A Multicomponent Intervention to Reduce Home-Exposure to Second-Hand Smoke (SHS) During Pregnancy and Postnatal Period (IMPRESS)

The IMPRESS was a pilot trial of a multi-component intervention which aimed to culturally adapt, and then evaluate, the effectiveness of evidence-based strategies to reduce second-hand smoking within homes in the peri-urban area of Bangladesh. It also aimed to determine the costs versus benefits of implementing such an intervention. The study was carried out in India and Bangladesh.

Key Publications:

- Jackson, C, **Huque, R**, Satyanarayana, V, Nasreen, S, Kaur, M, **Barua, D**, **Bhowmik, P. N**, Guha, M, Dherani, M, Rahman, A and Siddiqi, K. “He Doesn’t Listen to My Words at All, So I Don’t Tell Him Anything”—A Qualitative Investigation on Exposure to Second Hand Smoke among Pregnant Women, Their Husbands and Family Members from Rural Bangladesh and Urban India. (2016) International journal of environmental research and public health. doi:10.3390/ijerph13111098
- Satyanarayana VA, Jackson C, Siddiqi K, Chandra PS, **Huque R**, Dherani M, Nasreen S, Murthy P, Rahman A. A behaviour change intervention to reduce home exposure to secondhand smoke during pregnancy in India and Bangladesh: a theory and evidence-based approach to development. Pilot and feasibility studies. 2021 Dec;7:1-9.
- M Dherani, SN Zehra, C Jackson, V Satyanaryana, **R Huque**, P Chandra et al. Behaviour change interventions to reduce second-hand smoke exposure at home in pregnant women—a systematic review and intervention appraisal. BMC Pregnancy and Childbirth 17 (1), 1-10

Funding Agency: MRC, UK

Sponsor: University of Liverpool, UK

Partner Organisations: University of Liverpool, University of York, UK; NIMHANS, India

Duration: November 2015 - April 2017

Improving the Quality of Care of Children in Community Clinics: An Intervention and Evaluation in Bangladesh—Under COMDIS-HSD (Communicable Disease-Health Service Delivery) Research Programme Consortium

The study aimed to improve the quality of care of children in community clinics through an intervention and evaluation study. The objectives of this operational research were to assess 1) the change in knowledge of the Community Health Care Providers (CHCP) after training; 2) the absolute quality of care provided by the CHCPs (determined as the proportion of children aged >5 years [under-fives] correctly diagnosed, treated and referred); and 3) the consultation behaviour of the CHCPs.

The intervention contributed to a change in national policy and practice, with approximately 14,000 community health care providers nationwide given the job aid and trained.

Key Publication:

- **Huque R**, Ahmed F, King R et al. Improving quality of care of children in community clinics: an intervention and evaluation in Bangladesh. Public Health Action; 6(2) pp 77-82.

Funding Agency: FCDO, UK

Sponsor: University of Leeds, UK

Duration: March 2014 - December 2016

Strengthening Midwifery in Bangladesh – Lessons Learnt

The Foreign, Commonwealth and Development Office (FCDO) of the UK government has invested in the 'Strengthening Midwifery in Bangladesh' program to establish midwifery education. The FCDO is also providing technical assistance to the Government of Bangladesh through UNFPA. The government has demonstrated commitment to midwifery services by creating 2996 midwife posts. Currently, there are 1149 midwives working in 421 upazillas and 1312 sub centers, with 55 institutes offering a 3-year diploma course in midwifery studies.

FCDO commissioned ARK Foundation to conduct a study with the aim of investigating the role of licensed midwives in improving maternal and newborn healthcare services in Bangladesh. The study also aimed to generate insights on the effectiveness of midwifery services and their long-term impact on maternal health. Furthermore, the study aimed to provide suggestions for the future direction of the midwifery program, including identifying scale-up options, opportunities, and challenges by involving and linking private and NGO sectors for training more midwives.

The study employed a mixed-methods design, including desk review, interviews, focus group discussions, case studies, and observation. Data was collected from three purposively selected upazilas in three districts.

Key findings highlighted the positive impact of midwives in delivering core services such as antenatal care, postnatal care, deliveries, family planning, and newborn care. The study emphasised the need to scale up service delivery by midwives, strengthen health systems, and enhance midwifery education for program sustainability and quality.

Funding Agency: The Foreign, Commonwealth and Development Office (FCDO), UK

Duration: December 2021- June 2022.



Study findings has been disseminated in a workshop in the presence of the government, non-government stakeholders and policymakers

Urban Anchal

Urban Anchal was a study looking at sustainable day-care for 1-4 year-olds in disadvantaged urban communities in Dhaka, Bangladesh. It aimed to address the lack of safe, stimulating and health-promoting environments for adequate early childhood development (ECD). Urban slums provide a challenging environment for child health. With slum-dwelling women working long hours and limited availability of extended family, slum communities face a childcare vacuum, undermining children's healthy ECD. Adverse experiences and exposures increase the risk of poor health, social and cognitive outcomes during childhood and later in life.

Our study assessed the feasibility of providing day-care centres for young children in Dhaka. This presented a holistic solution, allowing women to work whilst knowing their children are safe and provided with ECD opportunities.

Key Publications:

- Elsey, H., **Fieroze, F.**, Shawon, R. A., Nasreen, S., Hicks, J. P., Das, M., ... & Saidur, M. (2020). Understanding demand for, and feasibility of, centre-based child-care for poor urban households: a mixed methods study in Dhaka, Bangladesh. *BMC public health*, 20(1), 1-14.
- Das, M., Elsey, H., Shawon, R. A., Hicks, J., Ferdoush, J., **Huque, R.**, **Fieroze, F.**, ... & Mashreky, S. R. (2018). Protocol to develop sustainable day care for children aged 1–4 years in disadvantaged urban communities in Dhaka, Bangladesh. *BMJ open*, 8(7), e024101

Funding: Medical Research Council (MRC)

Sponsor: University of Leeds, UK

Partners: University of Leeds, Centre for Injury Prevention and Research (CIPRB)

Duration: 2017- 2018



FGD with the Mothers of under 5 Children



Interview with the Father of a under 5 Child



SELECTED STUDIES ON HEALTH SYSTEM STRENGTHENING



Community-led Responsive and Effective Urban Health Systems (CHORUS)



CHORUS is a Research Programme Consortium that brings together health researchers from South Asia, West Africa, and the UK. CHORUS works with communities, health professionals and city level decision makers to strengthen the urban health system, especially for the urban poor.

ARK Foundation is currently implementing three projects under CHORUS.

Project 1 aims to strengthen service delivery, health workforce and health information system at urban primary health care facilities to manage essential NCDs. To meet this aim, the study has three linked phases.

Phase one aims at understanding the existing NCD management system at urban primary health care facilities, through literature review, analysis of secondary data, interviews of policy makers, health workers, and urban slum dwellers, and data were analysed using the WHO Health System Building Blocks framework. Several gaps were found within the urban primary health care systems in terms of NCD management, including unavailability of NCD guidelines across urban primary health care facilities, lack of NCD training among workforce of these centres, and absence of a NCD health information system within the system.



Training on Simple App for CHORUS



Co-Creation workshop with key stakeholders from different ministries and development partners



Research Assistants interviewing Health Care providers



Community Advisory Panel (CAP) meeting with Community members

Findings from phase one then led to the second phase which involved health facility assessment of urban primary health care centres and constant engagement with policy makers, health care personnel and urban dwellers, especially the poor. Through this process potential interventions for gaps were identified which were:

1. Ensuring availability of the “National Protocol for Management of High Blood Pressure and Diabetes at Primary Health Care Settings” at urban primary health care facilities,
2. To train urban primary health care workforce on the protocol, and
3. Introducing “Simple App” which is a mobile based application to record NCDs, and an NCD register at the facilities.

The third phase aimed at implementing the identified interventions at urban primary health care facilities. In order to achieve the goal, 16 urban primary health care facilities were selected which have equally been allocated to intervention and control groups. Implementation of the intervention would be evaluated using the RE-AIM (Reach, Effectiveness, Adoption, Implementation, Maintenance) framework, and involve a mix of methods such as observations, knowledge score assessment and interviews.



Prof. Helen Elsey Visited one study site in Khulna



Meeting between CHORUS Researchers and the Honourable Mayor of Khulna City Corporation



CHORUS Project 2 team arranged a workshop with the policymakers of Khulna city



CHORUS researchers conducting KII with policymakers from the Ministry of Health and Family Welfare

Project 2 aims to design and evaluate an appropriate strategic purchasing model for Bangladesh's urban primary health care system and also to develop a guideline for undertaking strategic purchasing along with the capacity strengthening of purchasers in Urban Bangladesh.

To meet this aim, a mixed method study is being conducted which will use qualitative (rapid reviews, key informant interviews, in-depth interviews, focus group discussions, and consultation workshops), quantitative (Discrete Choice Experiment, secondary data analysis, cost and impact evaluation) and participatory methods (transect walk and photo voice). The study is being conducted by following 5 steps, each with several activities to address the study objectives.

Step 1 of the study aimed to understand the current situation of strategic purchasing in Bangladesh's urban primary health care context. For this, 20 Key Informant Interviews (KII) have been conducted with policymakers from both the Ministry of Health and Family Welfare and the Ministry of Local Government, Rural Development and Cooperatives, development partners, urban health experts, and other relevant stakeholders. This qualitative exploration attempted to include all the existing urban primary health care models in the country.

Step 2 of the study focuses on understanding the purchasing needs of the urban community. This step will involve both qualitative interviews and participatory research methods. For IDIs and FGDs, people from urban areas, especially the poor, marginalised (physically and mentally disabled), and transgender community will be selected.

In step 3 of the study, the aim is to develop an appropriate model for purchasing primary health care in urban areas. Subsequently, step 4 will attempt to address the capacity gaps of the purchasers. And step 5 is related to costing and evaluating purchasing models as well as strengthening the capacity of purchasers.



CHORUS researcher conducting Key Informant Interview (KII) with policymakers from the Local Government Division

Key Publications:

- Wallace LJ, Agyepong I, Baral S, **Barua D**, Das M, **Huque R**, Joshi D, Mbachu C, Naznin B, Nonvignon J, Ofosu A. The role of the private sector in the COVID-19 pandemic: experiences from four health systems (2022) *Frontiers in Public Health*
- Naznin, B., Quayyum, Z., Tajree, J., Golder, S., Ebenso, B., **Barua, D.**, Ahsan, M., **Kabir, F.**, Joshi, D., Kakchapati, S. and Engmann, A. Assessment of Public-Private Partnership (PPP) Models in Health Systems in Least Developed, Low Income and Lower-Middle-Income Countries and Territories: A Protocol for a Systematic Review (2022) *Health Care: Current Reviews*

Funding Agency: FCDO

Sponsor: University of Leeds, UK

Partner Organisations: University of Leeds, University of York, HERD International, JPGSPH,

Duration: April, 2020 to March 2026

CRUCIBLE: A Novel Approach of Engaging with Poor Urban Communities to Talk about Health: a Scoping Study to Understand the Perceptions of the Key Stakeholders in Bangladesh

Attending school is a major challenge for children who live in the urban slums of Dhaka city. To address this problem, various NGOs and volunteers have established street schools and night schools, which have become an essential part of poor urban communities. In this context, CRUCIBLE aims to understand the current situation and promote health literacy among children aged 7-14 in informal settlement schools in Bangladesh. The aim of this scoping study is to engage key stakeholders in Bangladesh in the co-design of an intervention, to provide evidence of the priorities, and to support mutual understanding of potential challenges and constraints.

The study has three linked stages. Stage one includes documentary review (both published and unpublished) on arts-based approaches used in formal and informal educational contexts for health promotion in Urban Bangladesh. Stage two involves the process of stakeholder mapping from the Policy (Ministry of Primary Education), practice (NGOs, CBOs) and the community (community leaders, teachers and parents, etc.). Using semi-structured interviews, the next stage will engage these key stakeholders to understand their needs, priorities, perceptions, and experience around using arts-based educational approaches for community engagement to talk about health and well-being. The final stage aims to bring together the responses from the interviews and discussions with the key stakeholders to critically analyse the findings that will inform our understanding of the stakeholder priorities and needs.

Funding Agency: University of Leeds, UK

Sponsor: University of Leeds, UK

Partner Organisations: James P. Grant School of Public Health of BRAC University

Duration: May, 2022 – October, 2023

The Role of Community Group and Community Support Group in Community Engagement: A Mixed Method Study

In every Community Clinic, there is a Community Group (CG) and multiple Community Support Groups (CSGs). They have different tasks for community engagement. The aim of the study was to assess the role of Community Group (CG) and Community Support Group (CSG) in Community Engagement during the COVID-19 pandemic and after COVID-19. The study also identified the existing gaps and suggested how these gaps can be minimised.

Funding Agency: Ministry of Health and Family Welfare (MOHFW)

Sponsor: Community Based Health Care (CBHC), DGHS

Duration: January – June, 2023

CRUCIBLE: Co-Developing Gamification Methods for Infection Prevention Training Tools in Low Resource Healthcare Settings

The gamification IPC (Infection Prevention and Control) project, involving Bangladesh and Africa, aims to assess the priority needs of healthcare workers for improving awareness and behaviour regarding infection prevention and control. And then, with the help of healthcare professionals, develop a design brief for a prototype game for promoting improved risk awareness and behaviour among a target group.

The study will involve two rounds of interviews. The first round will follow a semi-structured interview approach and the second round will involve a structured one. The first round of interviews will be to assess the priority needs of healthcare workers in terms of improving infection prevention and control awareness and behaviour. The second round of interviews will be done to assess the views of healthcare workers on the effectiveness of different ways of communicating risk (e.g. visual, written and numerical representations); and, to assess the views of healthcare workers on the optimal forms of interactive game play that can support effective risk communication.

Funding Agency: University of Leeds, UK

Sponsor: University of Leeds, UK

Partner Organisation: Women's University in Africa, Zimbabwe

Duration: January, 2022 – January, 2024

Living in the City

Many developing countries are experiencing rapid and unplanned urbanisation as people move from rural to urban areas. This can create a variety of new health risks, from non-communicable diseases (as a result of lifestyle changes) and communicable diseases (since rural-urban migrants often suffer from sub-standard housing and inadequate water and sanitation facilities). At the same time, newly-urbanised people can find it more difficult than they did in their rural lives to access health services - partly because those services are over-stretched, but also because they lack the knowledge to navigate vastly more complex urban health systems, with their plurality of public and private service providers.

To capture the experiences and perceptions of both newly-urbanised people and providers of health services, a scoping literature review was conducted to understand the following broad questions:

1. How do newly urbanised people view the health risks/benefits of moving to the city?
2. How do newly urbanised people navigate pluralist urban health systems to fulfil their health needs? What health needs (if any) are they failing to fulfil?
3. What do service providers see as the particular needs and challenges facing the newly-urbanised? How can these insights inform local, city and national health system policy and planning?

The scoping literature review was conducted across Bangladesh, Nepal and Ghana to better understand lived experiences of the health costs/benefits of urbanisation and identify mechanisms to enhance the accountability and responsiveness of urban health systems to the needs of the newly-urbanised.

Funding Agency: GCRF, UK

Sponsor: University of Sheffield, UK

Duration: January, 2019 – March, 2020

Redesigning Career Path of Public Sector Health Care Providers for Effective Service Delivery in Bangladesh

General objective of the study was to develop a (guideline) career plan for medical doctors working in public health sector. Specific objectives were: a) to review the existing career paths of a medical doctor in the public sector in Bangladesh; b) to know how the career path of a medical doctor in the public sector differs in comparison with other professional sectors in Bangladesh; c) to redesign the career path of medical doctors based on specialisation in public sector, and d) to propose an organogram in different public sector health care facilities and public health sector administration.

Both quantitative and qualitative methods were used. Questionnaire survey was conducted among the samples of the medical doctors working under Directorate General of Health Services (DGHS), Ministry of Health and Family Welfare (MOHFW) to ascertain the current scenarios of career path for medical doctors including their status, experiences, health services organogram, perception about career path, and expectation. In addition, in-depth/key informant interviews, focus group discussion and consultative workshops were arranged.

Funding Agency: Ministry of Health and Family Welfare (MOHFW)

Sponsor: Health Economics Unit (HEU), Health Services Division (HSD)

Duration: January – June, 2022



Consultation workshop and focus group discussion regarding a study titled “Redesigning Career Path of Public Sector Health Care Providers for Effective Service Delivery in Bangladesh”

Study on Health Insurance in Bangladesh: Perception and Experience of People having Insurance

General objective of the study was to explore the perception and experience of people having health Insurance in Bangladesh. Bureau of Economics Research, University of Dhaka carried out the study, where ARK Foundation research team provided technical support.

Funding Agency: Ministry of Health and Family Welfare (MOHFW)

Sponsor: Health Economics Unit (HEU), Health Services Division

Partner: Bureau of Economics Research, University of Dhaka

Duration: 2020-2021

Utilisation and Effectiveness of Women Friendly Hospital Initiative: Problems, Prospects and Way Forward

The Women Friendly Hospital Initiative (WFHI) was launched in Bangladesh in 1998 with the goal of improving the quality of healthcare and addressing the needs of women during pregnancy, childbirth, and postpartum. The initiative aimed to reduce maternal mortality, fight against violence, and eliminate discrimination against women. It focuses on creating environment for women to be treated with respect and have access to quality care.

Key stakeholders at the national level include various wings of the Ministry of Health and Family Welfare (MOHFW), the Directorate General of Health Services (DGHS), and the Directorate General of Nursing and Midwifery (DGNM). At the local level, hospital staff, including superintendents, medical officers, consultants, nursing supervisors, and other healthcare providers, were involved.

The WFHI accreditation process involved a visit by the OGSB team and the Hospital Services Management operational plan (HSM OP) team for two to three days. The accreditation was valid for two years and is a continuous process. Baseline assessments and action plans are prepared to meet the accreditation requirements. Challenges include limited physical space, shortages of healthcare providers, and logistics constraints. A study found vacancies for physicians ranging from 22% to 75% and nurses from 2% to 58% in selected district hospitals. Bed occupancy rates exceeded capacity, making logistics, including medicine, unavailable.

Expediting the accreditation process for the planned 20 district hospitals and seeking technical assistance from organisations like UNICEF was suggested. It recommends resolving physical space constraints through repairs and renovations, addressing shortages of healthcare providers through engagement with relevant authorities, and resolving logistics constraints, including medicine availability, through coordination with superintendents and the MOHFW. To expand the WFHI, it proposed institutionalising the initiative within the DGHS and establishing a dedicated unit/cell for implementation and monitoring. Allocating separate funds for WFHI in the budget and promoting local resource mobilisation were also suggested.

Funding Agency: Ministry of Health and Family Welfare (MOHFW)

Sponsor: Gender, NGO, Stakeholder Participation (GNSP), Health Economics Unit (HEU), Health Services Division

Duration: January – June, 2020

Financial Risk Protection for Universal Health Coverage: Cross-Country Investigations

Aim of the project is to measure the financial risk protection and assess the effects of its determining factors in selected low- and middle-income countries to understand the status of universal health coverage.

Funding Agency: University of Gothenburg, Institute of Medicine, School of Public Health and Community Medicine, Sweden

Duration: October, 2022 – December, 2025



Meeting with international researchers for the study

Define Scopes, Opportunities, Challenges, and Way Forward for Developing a Stakeholder Coordination Strategy Towards Harmonizing GO/NGO Collaboration in the Health Sector

Bangladesh is a lower middle-income country with a population density of 1,265 persons per square kilometre and USD 1,855.74 per capita income. Understanding the opportunities and challenges, government-NGO collaboration is essential for optimising resources, improving health outcomes, and developing effective strategies. This study aims to identify the scopes, opportunities, and challenges of GO-NGO collaboration in Bangladesh's health sector. It also aims to recommend strategies for enhancing synergy between the Ministry of Health and Family Welfare (MOHFW) and government and non-governmental organisations (GO/INGOs) in the country's health sector.

A mixed-methods approach that includes a comprehensive desk review of secondary literature, key informant interviews with policymakers and influencers, and workshops with stakeholders engaged in healthcare services delivery. Global and regional case studies were also analysed to understand the scopes, challenges, and contextual factors of GO-NGO collaborations.

The study found that GO-NGO collaborations in the health sector have been effective and efficient in various programs, including TB, maternal and child health, family planning, immunisation, leprosy elimination, and nutrition. However, challenges such as duplication of efforts, inadequate government involvement, limited monitoring of NGO projects, political interference, and decreased funding from donor agencies were identified.

Funding Agency: Ministry of Health and Family Welfare (MOHFW)

Sponsor: Gender, NGO, Stakeholder Participation (GNSP), Health Economics Unit (HEU), Health Services Division

Duration: 2020-2021

Public Private Partnership in Improving Access to and Utilisation of Health Care Services: Scopes, Opportunities and Challenges

The term "public-private partnership" (PPP) is receiving considerable attention in the health sector for over two decades. The Government of Bangladesh enacted a law on PPP in 2015 to create opportunities and accelerate private sector participation in different sectors. However, though a few PPP projects were initiated in the health sector of the country, there is a lack of understanding on how best the public and private sectors interact with each other, what changes the partnerships can bring to improve access to and quality of health services, and how the challenges of health care need can be met through effective PPP.

This study aimed to identify the scopes and challenges of PPP which will inform a guideline to design and implement such collaboration to improve access to and quality of health care. We used a mixed method approach, and conducted a desk review, two case studies, in-depth interviews, focus group discussions and key informant interviews.

The key recommendations of the study are: a) a technical committee with relevant stakeholders can be formed for leadership and guidance to ensure coordination in the PPP process; b) a comprehensive guideline for PPP in health needs to be developed by the Ministry of Health and Family Welfare; and c) relevant stakeholders in both public and private sector need to be sensitised on PPP guideline.

Funding Agency: Ministry of Health and Family Welfare (MOHFW)

Sponsor: Gender, NGO, Stakeholder Participation (GNSP), Health Economics Unit (HEU), Health Services Division

Duration: January – June, 2020

Creating People-Centred Health Systems: Improving Systems Response to Feedback from Service Users in Bangladesh (RESPOND)

This project aimed to assess the existing systems of collecting, analysing and responding to, feedback from health service users at sub-district (Upazila) level; and designing a comprehensive health systems intervention to improve utilisation of user feedback in health service quality assurance and human resource management processes at Upazila level in Bangladesh. It was a multi-disciplinary and mixed-method health systems research study, using Realist Evaluation. We examined user feedback system at two Upazila Health Complexes within Comilla district in Bangladesh. The study comprised three steps: initial theory development; theory validation; and theory refinement and development of lessons learned.



Workshop on Designing Intervention to Improve Patient Feedback System at Upzila Health Complex

Key Publications:

- **Huque R, Azdi Z AI**, Ebenso B, Nasreen S, Chowdhury AA, Elsey E, Mirzoev T. Patient Feedback Systems at the Primary Level of Health Care Centres in Bangladesh: A Mixed Methods Study. *SAGE Open*. 2021 11 (2), 21582440211011458
- Mirzoev T, S Kane, **Azdi Z AI**, Ebenso B, Chowdhury AA, **Huque R**. How do patient feedback systems work in low-income and middle-income countries? Insights from a realist evaluation in Bangladesh. *BMJ global health*. 2021; 6 (2), e004357
- B Ebenso, **Huque R, Azdi Z**, H Elsey, Nasreen S, T Mirzoev. Protocol for a mixed-methods realist evaluation of a health service user feedback system in Bangladesh. *BMJ open*. 2017; 7 (6), e017743

Funding Agency: Joint MRC/ESRC/DFID/Wellcome Health Systems Research Initiative

Sponsor: University of Leeds, UK

Duration: January, 2017 - June 2018

Survey for Urban Equity (SUE): Getting, and Using, the Data to Respond to NCDs in Urban Areas

For public health services to respond to the growing burden of NCDs among the urban poor, the proper measurement of disease prevalence, risk factors and behaviours is a crucial first step. In low- and middle-income countries (LMICs), household surveys – such as the Demographic and Health Surveys (DHS) programme and the World Health Organization’s Stepwise Approach to Surveillance (STEPS) – provide vital data sources to inform national health sector planning in over 90 LMIC countries. However, the way these surveys are currently designed and presented undermines their use by decision-makers to monitor inter- and intra-urban health and plan interventions, and particularly to respond to the health needs of the poorest. The under-representation of the urban poor in these surveys means that health issues they experience are masked by the better health outcomes among the urban wealthy. This provides an overly rosy picture of urban health.

This study aimed to address these problems by testing novel survey sampling and mapping approaches, piloting questionnaires on mental health and injuries, exploring the nature and definitions of urban poverty and households and working closely with urban-health decision-makers to find the best ways to present and use the data we collect.



Project Meeting



In Depth Interview Dhaka City Corporation Chief of Health

Key Publication:

- Elsey H, Agyepong I, **Huque R**, Quayyem Z, Baral S, Ebenso B, et al. Rethinking health systems in the context of urbanisation: challenges from four rapidly urbanising low-income and middle-income countries. *BMJ global health*. 2019; 4 (3), e001501

Funding Agency: GCRF

Sponsor: University of Leeds, UK

Duration: January 2017 – June, 2018

Building Capacity for Community Mental Health Care in Bangladesh

Mental illness is also becoming a major public health problem in Bangladesh with rapid urbanisation influencing change in lifestyle of people, though there is limited evidence on the prevalence and distribution of mental illness among the population in Bangladesh. The study aimed to assess the prevalence and distribution of mental illness among people living in urban slums and to develop a referral pathway from community to health facility to support mental health care.

A total of 325 households were surveyed in one area within Dhaka North City Corporation – Kamrangirchar, the largest slum area in the city with an estimated population of 485,000 (Census 2011) living in approximately 6.5 square kilometres. We selected the site in light of study objectives and pragmatic factors such as operational constraints, willingness of health facilities to be involved in the survey and locations of our research partners. All household members aged 18 years and above, who provided written consent to take part in the study, were surveyed using the Self Reporting Questionnaire - 24 (SRQ-24) by trained Field Researchers over the period of June - August, 2018, which was then scored by the psychologists. The Depression and Anxiety Stress Scale (DASS) was administered among those who scored 7 and above in SRQ-24, by trained psychologists of the study team. In addition, DASS was also administered among a portion of those who scored less than 7 on the SRQ scale.

Total 635 adults were surveyed of which 311 (48%) were males and 325 (52%) were females. The mean age of the respondents was 33 years. Overall, 25% (n= 159) of the respondents were found to be SRQ positive (who scored 7 and above on the scale, or answered ‘Yes’ to at least 1 question from question 21 to 24 of the SRQ). Out of them, 65% (n=104) scored 7 and above on the scale, and 35% (n=55) had answered ‘Yes’ to at least 1 question from question 21 to 24 of the SRQ. DASS was administered on the 104 respondents, out of whom 10 were found to have severe to extremely severe depression, 45 were found to have severe to extremely severe anxiety and 37 were found to be under severe to extremely severe stress levels. Furthermore, among a portion of those who scored less than 7 on the SRQ scale, 1 was found to suffer from severe depression, 6 were found to suffer from severe to extremely severe anxiety and 5 were found to have severe to extreme severe stress. 35% of the patients (who had answered ‘Yes’ to at least 1 question from questions 21 to 24 on the SRQ scale) were referred to the psychiatrists for further management.

Funding Agency: NCDC, MoHFW

Research Partners: Medicines Sans Frontiers, CIPRB

Duration: January 2017 – June, 2018

Developing Concept Paper on ‘Civil Servants’ Health Protection Scheme in Bangladesh’

The concept note suggested a primary structure of health protection scheme for civil servants of Bangladesh highlighting benefit package, organisational framework and implementation plans.

Funding Agency: Ministry of Health and Family Welfare (MOHFW)

Sponsor: Health Economics Unit, DGHS

Duration: January – June, 2015

Others Key Publication:

- Hay, K., McDougal, L., Percival, V., Henry, S., Klugman, J., Wurie, H., Raven, J., Shabalala, F., Fielding-Miller, R., Dey, A., Dehingia, N., Morgan, R., Atmavilas, Y., Saggurti, N., Yore, J., Blokhina, E., **Huque, R.**, Barasa, E., Bhan, N., ... Rao Gupta, G. (2019). Disrupting gender norms in health systems: making the case for change. *The Lancet*, 393(10190), 2535–2549. [https://doi.org/10.1016/s0140-6736\(19\)30648-8](https://doi.org/10.1016/s0140-6736(19)30648-8)

Empowering Community of Advocacy and Equal Engagement for Tuberculosis Prioritising Key Populations ((ENGAGE-TB)



The "STOP TB Partnership," established in 2000 and based in Geneva, is committed to eliminating TB as a global health threat. It collaborates with governments, international organisations, civil society, researchers, and the private sector, operating under WHO's guidance. Its primary goal is to accelerate global efforts in line with WHO and UN SDG targets, working closely with key health organisations like the Global Fund to Fight AIDS, Tuberculosis, and Malaria. Khulna Mukti Seba Sangstha (KMSS) has received the grant for Round 11 in partnership with ARK Foundation.

The aim of the project is to empower the marginalised population through increased awareness on prevention and management of Covid-19 among TB patients and the community and make the health system more inclusive through responsive, gender transformative and innovative interventions for improved screening, referral, and adherence to TB treatment during the pandemic and beyond.



Advocacy Committee meeting for empowering our Ward against TB

In the commitment to battling tuberculosis (TB) and COVID-19, the project is more program based. The program is dedicated to empowering marginalised communities in Bangladesh. By sensitising and engaging women, transgender individuals, the floating population, and people with disabilities, we aim to ensure their active involvement in designing, implementing, and monitoring responses to TB and COVID-19 in Dhaka North City Corporation (DNCC), Dhaka South City Corporation (DSCC), and Khulna City Corporation (KCC). The project also seeks to improve TB referral systems in Dhaka and Khulna, enhance treatment outcomes, and establish a national-level TB Survivors network through a gender-transformative, community-driven, and inclusive approach. Additionally, we actively participate in TB advocacy and accountability initiatives at local, regional, and global levels to contribute to a healthier, more resilient world.

Funding Agency: Stop TB Partnership/UNOPS

Partnership: Khulna Mukti Seba Sangstha (KMSS)

Duration: May 2023- April 2024



Sputum Campaign



Advocacy Workshop with Women Leaders, Teachers & Service Providers of TB DOTS Centre



Courtyard sessions: Community Volunteer were awaring against TB

ARK in Partnership with Mannion Daniels is the New H.S.G Secretariat in 2023



The ARK Foundation, led by Executive Director Rumana Huque, has partnered with MannionDaniels, an international development consultancy, to lead the secretariat for the Health Systems Global (HSG).

Both ARK Foundation and MannionDaniels share HSG's vision of strengthening health policy and systems research communities to attain better and more equitable health outcomes.

MannionDaniels brings its experience of hosting global secretariats with diverse membership and using its established operational and financial acumen to do so. ARK Foundation brings its institutional record in health systems research and awareness of HSG's structures.

Karen Stephenson, Head of Health Systems and Public Health at MannionDaniels, and Rumana Huque, Executive Director of ARK Foundation, will jointly lead the secretariat.

This partnership is part of a long-standing collaboration between the two organizations. Both MannionDaniels and ARK Foundation are committed to supporting HSG in its mission to improve the health of people around the world through strengthening health systems research and capacity.



SELECTED STUDIES ON CLIMATE CHANGE AND MULTI-SECTORAL PROJECTS



Understanding the ‘Overlapping’ Risks of Climate Change and Urbanisation

In the era of climate change, growing inequality, rapid urbanisation, humanity is dealing with a complex knot of apparently separate but actually deeply entangled risks. If not addressed the risk synchronisation can lead to critical crises and eventually will overwhelm the societal capacity to adapt. These overlapping risks (OR) have differential impact across gender. Decision makers often assess these risks from siloed perspectives which results in siloed practices. Without a coherent understanding of these OR/s and the causation at play, an integrated and coordinated approach cannot be achieved, and this is what the project aims for.



Multistakeholder workshop on Climate Change Overlapping Risk

The case study is Dhaka, Bangladesh, one of the world’s fastest growing megacities subjected to both unplanned development and extreme climate change vulnerability. The project will bring together practitioners, city government and NGO/civil society officials from three sectors: environment, development and health. Our longstanding engagement with these sectors clearly indicates significant knowledge and capacity gaps to address ORs.

Sponsor: University of York, UK

Partner Organisation: ActionAid Bangladesh, International Centre for Climate Change and Development (ICCAD)

Duration: 2023

Understanding and Addressing the Shrinking Civic Space in Bangladesh: A Mixed Method Study



Meeting with National CSO representatives at Dutch Embassy Dhaka

The research project funded by the Dutch Ministry of Foreign Affairs (MFA) under the Learning for Strengthening Civil Society (L-SCS) program. The research will be conducted in partnership with the ARK Foundation in Bangladesh. The aim of the research is to strengthen civil society in Bangladesh by addressing the challenges faced by civil society organisations (CSOs) and promoting an enabling environment for their work.

The research project has three phases: research co-creation, research implementation, and research finalisation. The research questions to be addressed include understanding the factors that impact civic space,

exploring coping strategies of CSOs, and identifying strategies to reverse the shrinking civic space trend.

To shape effective practices of CSOs, generate new knowledge, and provide input into wider community engagements, the research will be carried out using a participatory approach, involving CSOs in the research process. The research findings will be used to inform policy advocacy, enhance coordination between CSOs and the government, and bring about positive changes in legislation and behaviour. Overall, the research project aims to contribute to the growth and effectiveness of civil society in Bangladesh by addressing the challenges faced by CSOs and promoting an inclusive and collaborative society.

Funding: The Dutch Ministry of Foreign Affairs (MFA)

Sponsor: MannionDanniels, UK

Partners: Burundi, Uganda, Sudan, Egypt, Lebanon, Niger

Duration: From January 2023 to June 2025.



CAPACITY DEVELOPMENT

&

RESEARCH UPTAKE



Capacity Development & Research Uptake

One of the core principles of ARK Foundation is to develop capacity of early and mid-career researchers on research methods, research implementation, ethics in research, academic writings, research uptake and communication. We encourage women leadership in research. We are dedicated to invest in capacity development through providing in-house, national and international training, joining workshops and conferences, and networking and engaging with stakeholders.

Strengthening Capacity to Become Public Health Leaders

Presenting at National and International Meetings

ARK Foundation recognizes the importance of key skills such as communication and networking for researchers to turn into Public Health Leaders. For this, researchers are often encouraged to present projects and represent the organisation at both, National and International levels.



Samina Huque is presenting the research uptake of CHORUS at the Annual Meeting, 2023



Workshop to scale up CVD prevention and management in Bangladesh



CHORUS Progress Meeting in UK, 2023



Fatema Kashfi, Umme Salma Anee, Masroor Salauddin and Nabila Binth Jahan, early and mid-career researchers at ARK Foundation, were sent to attend a week's writing workshop in Nepal, 2023

Zunayed Al Azdi presenting in the 'SavingBrains Data for Action Workshop' at MBRUniversity in Dubai, UAE on our project with Rohingya refugee mothers and children to contribute developing ECD and Mothers' mental health



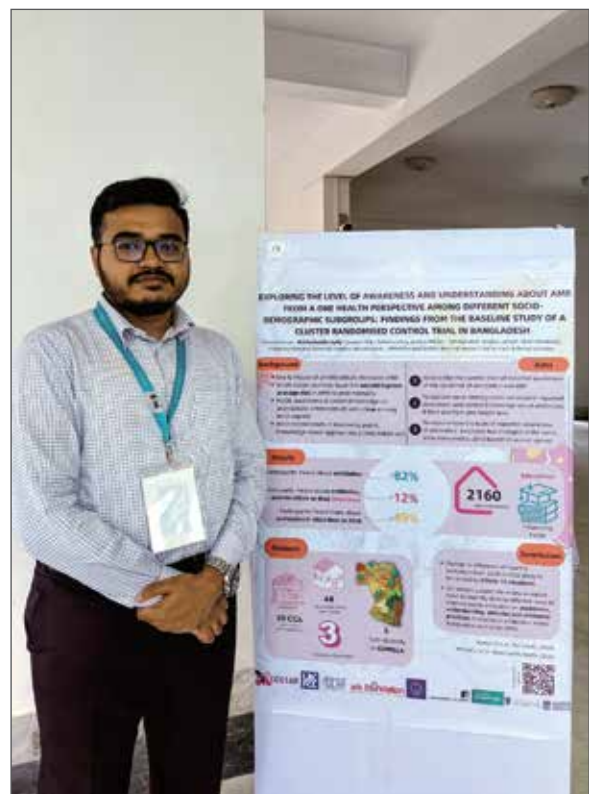
Presenting at National and International Conferences

Additionally, for early and mid-career researchers to further hone their networking and communication skills, they are always encouraged to submit abstracts at conferences, both in the country and abroad.



Fatema Al Kadri, a early career researcher of ARK Foundation presented an informative poster on "Prospect of differently abled women in start-up and small scalable business" at a conference organised by BRAC Institute of Governance and Development (BIGD), entitled "Making Digital Finance Work for Women".

Badruddin Saify, another outstanding early career researcher of the organisation presented an enlightening poster on “Exploring the Level of Awareness and Understanding about AMR from a One Health Perspective among Different Socio-Demographic Subgroups” at the International Health Economics Conference organised by Institute of Health Economics, University of Dhaka.



Dr. Fariza Fieroze, a highly experienced researcher at ARK Foundation presented a poster on an illuminating topic “Engaging Communities to Address Antimicrobial Resistance (COSTAR)” at the 11th One Health Bangladesh Conference. She also provided an oral presentation on “Community Dialogue for preventing and controlling Antibiotic Resistance in Bangladesh” in Public Health Association of Bangladesh: Annual conference 2021 and on “Urban day-care for improved health and social outcomes: research to understand demand and implementation of day-care in Dhaka” in Global Conference on Implementation Science in Dhaka.



Dr. Deepa Barua, another researcher at ARK Foundation had an opportunity to present an oral presentation on the vital topic “Are Urban Primary Health Care facilities prepared to Manage Non-Communicable Diseases?”, at the 18th International Conference on Urban Health (ICUH) in Valencia, Spain. She has also been selected to present at the 19th ICUH in Atlanta, USA and at the 13th European Congress on Global Health in Utrecht, Netherlands. Previously, Dr. Barua has also presented at the 17th ICUH on the topic “Covid and Cities”, and at an Annual Conference conducted by the Public Health Association of Bangladesh (PHAB) on “Health Systems Strengthening: Solutions for Tomorrow”.



Strengthening Capacity of Stakeholders

ARK Foundation believes it not only has a responsibility towards its researchers but also towards their stakeholders. Bearing this responsibility, ARK has both organised and facilitated training sessions within the country and abroad on several topics of importance such as Anti-Microbial Resistance, Non Communicable Diseases, and Research Methods.

ARK through Dr. Fariza Fieroze, the Country Trial Co-ordinator for COSTAR provided a Master Training of Trainers on Community Dialogue Approach to tackle Antimicrobial Resistance in Nepal. Additionally, she has also trained Community Dialogue Facilitators at several subdistricts in Cumilla, Bangladesh.



Dr. Fariza Fieroze & Badruddin Saify conducted training on Community Dialogues to tackle Antimicrobial Resistance with local community people in Cumilla



While working towards strengthening the urban primary health care system, ARK has facilitated the training of National Protocol for Control of Hypertension and Diabetes Mellitus among health workforce of Government Outdoor Dispensaries. Furthermore, they have also facilitated the digitalization of these facilities through training on a Health Information System called the “Simple App”



Strengthening Capacity on Research Topics and Methodologies

ARK has always prioritised the capacity development of its researchers. To strengthen the capacity of ARK Foundation’s early and mid-career researchers, the organisation has supported the strengthening of their capacity at both national and international training.

Most projects at ARK are often in collaboration with Relevant Ministries of Government of Bangladesh, such as the Ministry of Health and Family Welfare (MoHFW), Ministry of Local Government, Rural Development and Cooperatives, etc. For this reason, ARK Researchers are often sent to Government organised training on relevant topics.

While working on projects based on Mental Health, Dr. Deepa Barua attended training sessions conducted by the National Institute of Mental Health and Hospital on the use of Patient Health Questionnaire – 9 (PHQ – 9), and Mini International Neuropsychiatric Interview (M.I.N.I). Additionally, she has also been sent to a “Training of Trainers of the WHO Package of Essential Non-Communicable (PEN) Disease Interventions for Primary Health Care” organised by the MoHFW.



Understanding the importance of Monitoring and Evaluation to operate a project, Ms. Samina Huque, Project Co-ordinator ARK Foundation attended a training on Monitoring and Evaluation in Dubai, UAE, which was organised by University of Leeds, UK

Moreover, to be up to date about upcoming research methods, researchers have been sent on several trainings, both abroad and within the country.



Badruddin Saify, a researcher at ARK Foundation has attended a weeklong training on implementation science at University of York, UK.



Dr. Deepa Barua, another researcher, has been supported by ARK to attend a training course on Conducting a Mixed Methods Systematic Review, and Searching the Evidence Base at the University of Leeds, UK.

Additionally, the organisation has facilitated a series of 3-day short training courses conducted by the Centre for Professional Skills Development in Public Health BRAC James P Grant School of Public Health on the following areas.

With rapid urbanisation and the resulting unhealthy lifestyle among Bangladesh's city dwellers, various non-communicable diseases are on the rise in the country's urban areas. Understanding the importance of addressing it, some of ARK's researchers attended a short course on 'Health Economics and Non-Communicable Diseases (NCD) Policies' in February 2023. During this training, researchers learned how to gain a grasp of the fundamental ideas in health economics that are pertinent to policy analysis for global and regional contexts, as well as NCD prevention and control. Additionally, they learned about the development, evaluation, and execution of national policies for the prevention and control of NCDs.

The organisation has been constantly working to generate evidence through research and applying a range of methods to do that. To develop its researchers' skills in various research methods, researchers from ARK participated in a short course

on 'Systematic Review on Health Research' in February 2023. The course covered various literature review processes, systematic review steps, and how to search for articles using Boolean operators and PICO. Additionally, it covered the Cochrane Review Protocol, narrative synthesis, thematic synthesis, meta-analysis etc. The course provided valuable insights into how to conduct a review systematically.



Data analysis being an absolutely integral part of research is of utmost importance to cumulate the key message of the data collected. In this regard, researchers from ARK attended a short course on ‘Quantitative Data Analysis using R’ in January 2023. The course taught the intuition behind the R programming language, how to conduct statistical tests, and data manipulation in R. Researchers also learned how to wrangle data and filter out relevant answers effectively.



Finally, the course provided valuable insight into how and when to use appropriate statistical techniques. On the other hand, qualitative researchers from ARK attended a short course on ‘Qualitative Data Analysis using Nvivo 12 Pro’ in March 2023. The course offered an opportunity for researchers to learn from lectures on basic concepts of qualitative data analysis approaches, how to code and develop themes and patterns from qualitative data with hands-on exercises using NVivo, along with how to write and present qualitative findings.



Conducting in-House Training

Additionally, researchers at ARK Foundation have had opportunities for their capacity to be strengthened through training provided by Professors and faculty members of several reputed International Universities during their visits in Bangladesh.



Shakhawat Hossain Rana, Senior Research Assistant of ARK Foundation is providing training on **REDCap** for Quit4 TB Trial international team. Researchers at ARK also share their experiences and arrange in house Training on relevant topics for team member.



Samina Huque is conducting M & E Training in ARK office



Strengthening Capacity of Researchers to Write

Publishing Papers

Since its inception, ARK Foundation has always encouraged and guided early career researchers to contribute adequately while writing scientific articles. This in turn has helped researchers to be co-authors in papers published in high impact factor journals.

Additionally, ARK also supports its early and mid-career researchers to attend writing workshops and training to help them write scientific articles as first authors.



Dr. Fariza Feiroze and Badruddin Saify attended a writing workshop in the UK organised by the University of Leeds, while Dr. Deepa Barua attended another writing workshop in the UK organised by the University of York.

Moreover, a group of researchers to attend a short course on ‘How to write a Scientific Report: An Introduction’ in March 2023. This course helped the researchers to enhance their ability to gather and analyse data, and critically interpret and discuss findings in writing. It also gave them an idea about how to convert a scientific report into a manuscript as well as the basic steps of publication in a peer-reviewed journal article.



Writing Grant Proposals

Early and Mid Career Researchers at ARK Foundation are encouraged to submit proposals for grants under the direct supervision of faculty members from reputed International Universities such as University of Leeds, University of York etc. Additionally, researchers are also guided through senior researchers at ARK.

Supporting Students from National and International Universities in Their Research Projects

Last, but not least, ARK Foundation is also an organisation which supports both National and International Interns in their research projects. While ARK has been a place where National Interns, especially from the University of Dhaka have received placement opportunities to learn about research, the organisation has also been supportive of International Interns like those from the University of Leeds and York.

We Support our Researchers to Pursue Higher Studies. After Working on Tobacco Control Research at ARK Foundation, Three of our Researchers are Currently Enrolled in PhD in Reputed Universities.



S M Abdullah
Second Year PhD Researcher in Health Sciences
University of York, Department of Health Sciences, UK
[Former Senior Research Fellow, ARK Foundation]

My journey in the field of health research began with the establishment of the ARK foundation. Over the past decade, my research career has grown alongside ARK. I am grateful for being a small part of their remarkable journey of ten years of successful research accomplishments. ARK has provided me with all their research facilities since my early days, helping me gain information from field-level experience towards research publication, which is the final home for research evidence. The organisation gave me the opportunity and independence to understand the practicalities of health research, which are often crucial and require out-of-the-box thinking.

At ARK, they value individuality and encourage the pursuit of personal research interests. I am currently working towards a PhD in health sciences at the University of York, UK focusing on illicit tobacco. Thanks to ARK's training program, the Tobacco Control Capacity Programme (TCCP), I had the opportunity to collaborate with some of the world's most esteemed tobacco researchers and broaden my knowledge on the subject. Participating in the Addressing Smokeless Tobacco and Building Research Capacity in South Asia (ASTRA) program, offered to me by ARK, fueled my passion for the topic even more. This experience enabled me to find my research mentors, who provided essential academic structure to my research ideas in the field of tobacco. As a result, I embarked on my PhD research in January 2022 with even greater enthusiasm and determination.

I owe my current position and professional success in healthcare research to ARK, which graciously provided me with an opportunity to grow. Although I currently reside thousands of miles away from the ARK office, I still feel connected to the team. The winter here is harsh and struggling, but whenever I need a boost of warmth and excitement, I envision myself sitting at my desk in the ARK office back home. I have faith that ARK will continue to provide opportunities for early career scholars for many years to come. Congratulations to the entire team on their 10-year anniversary!



Tarana Ferdous
Third-year doctoral candidate in Public Health Epidemiology
Florida International University,
Miami, Florida, USA.
[Former Senior Research Associate, ARK Foundation]

My journey with the ARK Foundation began in 2016. As an early career researcher, I was thrilled to take on a lead position for a large-scale community-level research (a mixed method Cluster Randomised Controlled Trial) study with multiple engagements. 'Learning by doing' was the guiding principle for my five-year journey with ARK, where I led three large-scale multi-country research projects. From the corner of a hustle-bustle city to the room of an international symposium, from engaging with people facing the harsh consequences of health disparities to the professionals working painstakingly to improve it—there was always something to learn. ARK provided me with the freedom of work, a cosmopolitan environment for learning and doing research, supportive colleagues, and a healthy work-life balance, for which I am forever grateful. It has been two years since I left ARK to start my doctoral degree in the USA. As I write about my time at ARK from thousands of miles away, I feel nostalgic- so many fond memories and cherished experiences that have shaped me into the person I am today. These experiences have helped me to build projects from scratch, gain confidence, and shape my decision-making skills, not just in the research arena but also in my personal life. I was one of the earliest members of the ARK Foundation when it started its journey in Bangladesh as a non-profit organisation with a vision of socio-economic development in Bangladesh. Seeing how ARK has thrived since then and is celebrating its decade-long progress and successes gives me immense pleasure. I am very proud to be a part of this organisation, and I wish for the continuing success of the organisation in making the world a better place.

I want to end here with a thank you note for my immediate supervisor in Bangladesh, Dr. Rumana Huque, and my international supervisors, Dr. Kamran Siddiqi, Dr. Helen Elsey, and Dr. Noreen Mdege, who made me believe in myself and always look forward to thriving. Because of leaders like them, I dare to reach out for opportunities, as I realise I may not get it, and there is nothing to lose at the end, but if I get it, here I go!

ARK Foundation hosts national and international students for internship, supports international PhD students in data collection.



Dr. Zainab Kidwai, BDS, MDPH, PhD, Department of Health Sciences, Faculty of Sciences, University of York appreciated her collaboration with us!

"Heartiest congratulations to the ARK Foundation on their 10th anniversary! I was honoured to collaborate with ARK during my PhD fieldwork and saw firsthand their incredible work ethic and commitment to serving vulnerable communities.

The ARK team was so supportive and welcoming. When the pandemic hit and I had to readapt my research, they went above and beyond to help me safely collect data. Their on-the-ground knowledge and relationships within local communities were invaluable and greatly enriched my research experience. The connections I forged during that time are still going strong today. Thank you for taking me in as one of your own, guiding my research, and making my PhD journey richer, wiser and more meaningful."



Rasedul Islam Rasel
Intern
Student, Institute of Health Economics, University of Dhaka

Nurturing Excellence: Unveiling a Path of Learning and Inspiration at ARK Foundation Bangladesh

With much enthusiasm, I'd want to share my heartfelt experience during my internship at ARK Foundation Bangladesh. I had the great opportunity to work alongside the COSTAR team, and it has truly been an eye-opening and valuable experience. During my stay there, I developed a variety of skills and expertise in areas such as communication, time management, and research.

The pleasant and welcoming working environment was one of the most excellent aspects of my internship. The co-workers and supervisors were personable, supportive, and created a pleasant environment that made me feel at ease and eager to learn.

Working on the COSTAR project taught me great lessons and abilities. As I had to adapt to an office schedule and juggle several activities, learning to manage my time effectively was a valuable lesson. Interacting with stakeholders, supervisors, and public servants boosted my communication skills and provided me with practical ideas.

Understanding Cluster Randomised Control Trials (cRCT) and diverse research approaches was eye-opening. Learning about data entry, database administration, and questionnaire design for quantitative and qualitative studies equipped me with practical research skills. I also received experience with research procedures, data analysis tools, and transcription/translation for qualitative studies, which I believe will be useful as I complete my education and pursue a career in research.

In conclusion, my internship at ARK Foundation Bangladesh was a transformative learning experience. It equipped me with a diverse skill set and a wealth of knowledge in various areas. Learning to manage my time effectively and thrive in a professional setting were valuable lessons that I will carry forward in my future endeavors. I am truly grateful for this opportunity and excited about the path ahead.



Antonia Salem
Medical student
University of Leeds
UK

I was lucky enough to work with researchers at the ARK foundation for my project whilst doing a degree in International Health. The team of researchers I was in contact with were fantastic and so quick to respond to any queries I had. I was very grateful that they shared their important research with me and I hope I have made connections for my future. Coming from the UK, it was enlightening to be informed about how non-communicable diseases are managed at the primary care level in Bangladesh.

Safeguarding

We have a dedicated focal person for Safeguarding, who is responsible for developing the ARK's code of conduct, safeguarding policy, conducting orientation on safeguarding for the staff, and to receive concerns and reports when required. We have defined our safeguarding priorities, co-created our safeguarding statements, approaches and expectations, and committed to mitigate any issue effectively and collaboratively.

ARK's safeguarding lead, Ms. Samina Huque regularly conducts safeguarding training sessions for its employees.



As the focal person of safeguarding, Ms. Samina Huque is also responsible for developing ARK's code of conduct and safeguarding policy and has developed project specific documents on safeguarding.

Additionally, she also met with project specific safeguarding leads at the University of Leeds, UK. She went on to discuss about ARK's safeguarding capacity needs and identified potential ways to strengthen safeguarding among ARK's employees.

Health Economics Research Network



ARK Foundation, in partnership with Centre for Health Economics (CHE), University of York, UK and supported by DiaDeM project, formed the Health Economics Research Network (HERN) for bringing together local and international partners and experts, and economists and health economists who are working in the field of health economics. This initiative aims to bridge the knowledge gap and create a platform for researchers to carry out context-specific research in the field of health economics. HERN arranges webinars, supports early and mid-career researchers in writing academic papers, research proposal through mentor-mentee programme, and provides a platform for networking and knowledge sharing. You can also find more about HERN at Facebook (<https://www.facebook.com/bdhern>) and X (formerly Twitter) @HealthEcoRN.



HERN Organized Webinar on different economic tools

Research Uptake

Generally, Research Uptake means all activities that facilitate and contribute to the use of research evidence by policy-makers, practitioners, community and other development actors and stakeholders. ARK foundation has been emphasizing on research uptake activities by translating research findings into meaningful change in capacity to understand health related problems, policies, practice and funding streams.

Our aims of research uptake include- policy recommendation and influence, stakeholder engagement, capacity building, effective communication, advocacy, equitable partnership, create awareness, and overall, help build a resilient health system. Dr. Rumana Huque placed her speech in the consultation meeting titled ‘‘ Fiscal and Regulatory Mechanism for Promoting Healthy Diet in Urban Bangladesh’’ on November 25, 2022, in Hotel Seagull, Cox’s Bazar. Honorable Deputy Speaker of Bangladesh National Parliament Md. Shamsul Haque Tuku was present as the chief guest. This meeting was jointly arranged by ARK Foundation, Health Economics Research Network (HERN), Center for Law and Policy Affairs, International Development Research Centre (IDRC, CRDI) and Dhaka International University (DIU). The guests discussed about the importance of promoting healthy food, creating awareness about the adverse health effects of processed food and a proposition to increase tax on junk foods.



NIHR team visited ARK project sites, 2022



Dialogue on Improving Health Service Delivery to achieve Universal Health Coverage, 2018



ARK Team Joined GFGP (Good Finance Grant Practice) Training Arranged by The University of Edinburgh, Malaysia, 2023



TCCP project meeting in London, 2019



Our Research Fellow Sushama Kanon Joined World Psychiatry Congress



ARK Team Joined RESPIRE Scientific Annual Meeting 2023 at Indonesia



CHORUS Media Engagement Meeting

Fun Time!

“All Work and No Play Makes Jack a Dull Boy”! This is a saying that ARK truly believes in. Be it observing special health days, or be it observing fun days, ARK employees celebrate them to the fullest! While ARKs’ employees always participate in observing national health days with fervour, they sure know how to play and party.

Be it festivities like “Pohela Boishakh”, or be it FIFA World Cup Fever, the ARK team ALWAYS makes sure the events are embedded into memory. The organization has always gone above and beyond to make its employees feel special on their birthdays, and make farewells as tearful as they can get. In short, ARK believes and respects upholding team spirits, and that’s what makes it a special place to work in.



Birthday Celebrations at ARK Office



Womens Day celebration at ARK office



ARK Picnic



Warm-up before a friendly match between two teams of ARK



Pahela Boishakh Celebration



FIFA World Cup Celebration

Non-Publication Research Outputs

Policy briefs

1. Preparedness of Urban Primary Healthcare Centres of Bangladesh in Managing Diabetes Mellitus and Hypertension. 2023.
2. Informal Payments as a Barrier for Fruits and Vegetables Retailing in Bangladesh: Findings from a Mixed Method Study. 2022
3. Vegetables and Fruits Retailers in Two Urban Areas of Bangladesh: Disruption due to COVID-19 and Implications for NCDs
4. The Complicated Cigarette Tax Structure in Bangladesh is Causing Expansion of the Low-Tier Cigarette Market and Lower Tax Revenue
5. Price Elasticity of Cigarette Demand: Implications for Cigarette Taxation in Bangladesh
6. Public Private Partnership in Improving Access and Utilisation of Health Care Services: Scopes, Opportunities and Challenges
7. Taxation on Sugar-Sweetened Beverages (SSBs) in Bangladesh: What should we do?
8. COVID-19 and Tobacco. 2020.
9. Integrating tobacco cessation within the TB programme: Findings from the ‘TB & Tobacco’ study. 2018
10. The Impact of the Covid-19 Pandemic on People with Severe Mental Illness and on Mental Health Service Provision in South Asia (IMPASS)
11. Covid and Cities: Bangladesh case study report



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