icddr,b’s response to the COVID-19 pandemic

October 2020
icddr,b has been actively monitoring the development of novel coronavirus disease pandemic since December 2019, with particular focus on the health and well-being of the people of Bangladesh, as well as on the continuity of research, and hospital operations.

It has also been providing support to the Government of Bangladesh and its partners, responding to the urgent needs of the country.
SUPPORT TO THE GOVERNMENT OF BANGLADESH AND THE HEALTH SYSTEMS

icddr,b has been working closely with the Government of Bangladesh in its COVID-19 response through various capacities including preparing healthcare providers, strengthening health systems, disease surveillance, and research activities.

1.1. ASSISTANCE TO NATIONAL TECHNICAL ADVISORY COMMITTEE (NTAC)

On 19 April 2020, the Ministry of Health and Family Welfare (MoHFW) formed a national technical committee with 17 health experts to tackle the spread of COVID-19 in the country. Being a part of the NTAC, icddr,b has been providing technical support on the prevention of the disease, improvement of quality of health services in hospitals, and vaccine research. In doing so, icddr,b has conducted a rapid assessment on health facility preparedness and readiness for COVID-19 response. icddr,b has also been assessing the status of maternal, neonatal and child healthcare at the health facilities in context of the COVID-19 pandemic, and risk assessment of healthcare workers involved in managing COVID-19 cases.

1.2. TECHNICAL ASSISTANCE TO THE DGHS PUBLIC HEALTH COMMITTEE

icddr,b has been supporting the Directorate General of Health Services (DGHS) in the national COVID-19 response as a member of the Public Health Expert Panel. An icddr,b scientist has been assigned to provide technical assistance to the multi-sectoral COVID-19 response team engaged in Khulna Division.

1.3. COVID-19 DIAGNOSIS

icddr,b has been supporting the DGHS with the COVID-19 test and also sharing the results with them. So far, 54,387 (as of 31 October 2020) samples have been tested. Additionally, icddr,b diagnostic centre is offering COVID-19 test to the general public commercially since June and has tested 27,544 (as of 31 October 2020) samples so far.

Moreover, the MoHFW has assigned icddr,b diagnostic centre to provide COVID-19 Fit-to-Fly certificates for passengers travelling abroad.

1.4. EXPANSION OF COVID-19 TEST FACILITIES

icddr,b has been supporting the DGHS to establish new COVID-19 testing laboratories across the country and to strengthen the capacity of medical technologists and biosafety standards of these laboratories. The on-site trainings have been completed for 19 GoB laboratory staff working in 7 different labs outside Dhaka.

Additionally, with funding support from fhi360, USA, four of icddr,b staff members are assigned to support the Institute of Epidemiology Disease Control And Research (IEDCR) laboratories in Dhaka and Cox’s Bazar to undertake Reverse Transcription Polymerase Chain Reaction (RT-PCR) assay.

On top of this, 20 government laboratory staff have received hands on training on RT-PCR assay at the Virology Laboratory of icddr,b. Country wide district level Covid-19 laboratories are also being visited and assessed first hand by icddr,b staff.

Global Affairs Canada (GAC) is funding this initiative.
1.5. STRENGTHENING LABORATORIES

The Bio-Medical Engineering Unit (BMEU) of icddr,b in collaboration with Centers for Disease Control and Prevention (CDC), USA and American Society of Microbiology (ASM), USA has been providing technical support to various public and private laboratories engaged in COVID-19 testing. This includes repair and certification of Biosafety Cabinet (BSC) as well as capacity development of staff on Standard Operating Procedure (SOP). So far, five biosafety cabinets have been repaired and seventeen biosafety and laminar flow cabinets of the IEDCR, Dhaka Medical College and Gazi Group have been calibrated. Expansions of this support to other laboratories are underway.

Additionally, capacity straightening of medical technologists of several Medical College and district hospitals on the standard nucleic acid extraction procedures is underway with generous support from UNFPA.

1.6. THE COVID-19 SURVEILLANCE

Under the National Influenza Surveillance, icddr,b has been working in collaboration with the IEDCR in nine government hospitals across the country. The scope of this surveillance expands to understanding the prevalence of COVID-19 in the country.

1.7. STRENGTHENING HOSPITALS

In order to develop and implement a Standard Operating Procedure (SOP) for management of COVID-19 patients, icddr,b has contributed to the development of the national preparedness and rapid assessment checklist and led the development of online training materials for assessors. Subsequently, it has facilitated training of more than 100 assessors from 10 development partners.

As per DGHS’ request, icddr,b further conducted rapid assessment of more than one fourth of the total hospitals and medical colleges (32 in total) of the country.

UNFPA and UNICEF supported this effort.
1.8. STRENGTHENING INFECTION PREVENTION AND CONTROL (IPC)

iccdr,b has contributed in the development of national IPC guidelines for healthcare providers in hospital settings. Additionally, technical support was provided in developing training materials on ‘IPC and Clinical Case Management’ and undertaking trainings in Dhaka and five other districts.

iccdr,b has also supported the monthly IPC committee meetings in five district hospitals in Bangladesh. Also provided were essential logistics, which includes basin with accessories, bar/liquid soap, hand sanitizers, five colour waste disposal bins, three-layer surgical masks, fingertip pulse oximeter, infrared thermometer, non-rebreather mask with reservoir bag, oxygen mask, venturi mask, paddle bin, nasal oxygen cannula, hand mike to six hospitals [five district hospitals and Obstetrical and Gynaecological Society of Bangladesh (OGSB) Maternity Hospital]. Expansion of this support to 20 more district hospitals is underway in the areas of FCDO’s (former DFID) Better Health project.

This initiative is supported by UNFPA.

1.9. STRENGTHENING ESSENTIAL MNCH SERVICES

iccdr,b has contributed in the development of the National Maternal, Neonatal and Child Health (MNCH) Guidelines in the context of the COVID-19 pandemic in Bangladesh.

iccdr,b in partnership with UNFPA and Obstetrical and Gynaecological Society of Bangladesh (OGSB) has developed training packages for healthcare providers and provided orientation training on the MNCH Guidelines (COVID-19 context) in 14 district hospitals, 66 Upazilla Health Complexes, and to the healthcare providers at the OGSB Maternity Hospital.

This initiative is also supported by UNFPA.

1.10. PSYCHOLOGICAL SUPPORT FOR HEALTHCARE WORKERS

The healthcare workers working in the COVID-19 designated hospitals have been under extreme psychological stress due to workload, high risk of infection, lack of confidence in infection prevention and control measures, and limited scope to spend their time with family and friends. In order to address their psychological wellbeing, iccdr,b with guidance from the DGHS and in collaboration with the Clinical Psychology Department, University of Dhaka and the National Institute of Mental Health (NIMH) has established a pool of clinical psychologists and psychiatrists who are willing to provide support service to improve mental well-being of frontline healthcare workers through a call centre. Presently, the clinical psychologists and psychiatrists are providing mental health support to healthcare providers of five COVID-19 hospitals in Dhaka and 20 district hospitals across the country. Along with the individual and group counselling, four webinars have already been organised by iccdr,b on stress management in hospital settings.

This initiative is also supported by UNFPA.

1.11. INTRODUCTION OF COVID-19 SAMPLE COLLECTION VAN

iccdr,b and Concern Worldwide have launched a mobile COVID-19 sample collection van in Patuakhali district for ramping up the capacity of proper collection of samples on 6 September 2020. The mobile van provides sample collection and transportation service to the residents of Kolapara and Galachipa Upazila through respective Upazilla Health Complexes and is used for transporting collected samples to Patuakhali and then further to Barisal (three days a week), where the samples are tested for COVID-19.
2.1. TRANSMISSION DYNAMICS OF COVID-19 IN BANGLADESH

icddr,b has been supporting the IEDCR in contact tracing and also jointly implementing a project titled “Transmission Dynamics of COVID-19 in Bangladesh” to investigate transmission at the community level. The objective of this study is to estimate the proportion of symptomatic and asymptomatic COVID-19 cases; identify the risk exposure related to COVID-19 cases and determine the ‘extent of transmission’ of COVID-19 within a household. The project has also explored challenges of home isolation and stigma faced by households with confirmed COVID-19 case/cases and estimated the population level sero-prevalence of COVID-19.

A preliminary dissemination seminar was held on 12 October 2020, which was graced by the Honourable Minister Zahid Maleque MP, Ministry of Health and Family Welfare (MoHFW). National and international public health experts, representatives from the MoHFW, DGHS, IEDCR, UNICEF, USAID, icddr,b, Bill & Melinda Gates Foundation (BMGF) and media were also present at the seminar.

The study is supported by the USAID.

For more on the study please visit https://bit.ly/37hCLu

2.2. COVID-19 AMONG PATIENTS ADMITTED TO THE SELECTED HOSPITALS IN BANGLADESH WITH SEVERE ACUTE RESPIRATORY INFECTION

The project is engaged in detection of COVID-19 among suspected COVID-19 patients at inpatient and outpatient departments of four selected hospitals. These are Jahurul Islam Medical College Hospital, Kishoreganj; 100-bed District Hospital, Narshingdi; Adunik District Sadar Hospital, Hobiganj and 250-bed General Hospital, Potuakhali.

From 10 June 2020 to 31 August 2020, the study has enrolled 2,347 COVID-19 suspect individuals; of them 39 per cent (924 individuals) were found to be COVID-19 positive.

The study is supported by the EHD/Concern Worldwide, Bangladesh and the FCDO (former DFID).

2.3. MULTICENTER STUDY OF NOSOCOMIAL TRANSMISSION OF THE SARS-COV-2 VIRUS

The study aims to describe and document suspected or confirmed cases of nosocomial (hospital-acquired) SARS-CoV-2 infection, what are the clinical spectrum and the determinants (risk factors/protective) present at the participating hospitals.

As of 27 August 2020, the study has enrolled 703 participants from three hospitals, which are Mugda Medical College Hospital, Dhaka; Khulna Medical College Hospital, Khulna and Chottogram Medical College Hospital, Chottogram. Among the participants, 587 were patients while 116 are healthcare workers.

The study is supported by the Mérieux Foundation, France.

2.4. CLINICAL EVALUATION OF A POINT-OF-NEED DIAGNOSTIC SYSTEM FOR DETECTION OF COVID-19 TOWARDS ITS DEPLOYMENT AT PERIPHERAL HEALTHCARE SETTINGS

The study aims to explore the diagnostic efficiency of Recombinase Polymerase Amplification (RPA) assay in comparison with RT-PCR in detection of coronavirus from clinical samples. It will also assess the safety and feasibility of the glove box for isolation of nucleic acid in clinical samples collected from the suspected coronavirus patients. So far, initial validation and optimisation of the laboratory SOPs to evaluate the RPA assay for detection of COVID-19 are completed and all Ribonucleic Acid (RNA) samples from 100 COVID-19 patients and equal number of controls have been retrieved and randomisation is completed.

This project is supported by Sida.

2.5. OPTIMISING THE TREATMENT OF COVID-19 ADULTS WITH SEVERE PNEUMONIA AND/OR ARDS USING AN ADAPTIVE VERSION OF LOCALLY MADE BUBBLE CPAP

The study has two parts, the first part will test the design feasibility of the device in healthy individuals, and then evaluate the safety of the device in COVID-19 adults with severe pneumonia. This is to monitor the SpO2 and other vital signs as well as measure the status of CO2 retention. Finally, the project will evaluate the proportion of treatment failure or death among COVID-19 adults with severe pneumonia receiving adult bubble CPAP.
contrasting with WHO recommended standard oxygen therapy. The second part of the study will develop rapid training and logistics support and test the safety and efficacy of adult bubble CPAP among hospitalized COVID-19 patients with severe pneumonia and hypoxemia who have failed with WHO standard oxygen therapy. It will take place at icddr,b Dhaka Hospital.

This study is supported by Sida and Global Affairs Canada (GAC).

2.6. SEROSURVEILLANCE OF COVID-19 AND MENTAL HEALTH AMONG SLUM DWELLERS IN DHAKA CITY AND ITS OUTSKIRT

The study aims to determine the age-specific prevalence of SARS-CoV-2 specific antibodies (IgM & IgG) among slum population (>10 years) in the Urban Health and Demographic Surveillance Systems (UHDSS) areas of icddr,b. It will also determine the risk factors (biological, sociodemographic and biochemical) for acquisition of COVID-19 infection by comparing asymptomatic, symptomatic and seronegative/non-infected individuals; and will determine mental health status among the head of the households and the spouse in relation to family income, food insecurity and health security of the families.

The study area comprised of Korail, Dhalpur/Shayampur and Tongi/Ershad Nagar slums under Dhaka North, South and Gazipur City Corporations.

The study is supported by Global Affairs Canada (GAC).

2.7. FOOD INSECURITY WITH THE COVID-19 PANDEMIC

The study aims to assess the extent of food insecurity and undernutrition among urban and rural people during the pandemic in Bangladesh and develop a guideline for providing a basic food package for maintaining daily dietary requirements to combat undernutrition.

The urban (Bauniabadh slum, Mirpur Dhaka) and rural (Matlab, Chandpur) areas of Bangladesh will be included in the study.

The study is supported by Global Affairs Canada (GAC).
**2.8. BIOSAFETY AND BIOSECURITY FOR MANAGING COVID-19 IN LABORATORIES AND HEALTHCARE FACILITIES**

icddr,b shared its technical expertise in biosafety and biosecurity to contribute to the capacity development of several African nations. Three sets of two-day workshops for Nigeria, Cameroon, Sudan, Somalia, Uganda and The Gambia have been conducted.

The Islamic Development Bank (IsDB) funded this project.

**2.9. COVID-19 TESTING AND TRACING IN BANGLADESH**

The overall goal of this project is to assist the efforts of the Government of Bangladesh in COVID-19 testing and tracing. icddr,b will test SARS-CoV-2 in swab specimens collected from COVID-19 patients from different platforms in Bangladesh. It will also validate COVID-19 serological assays and investigate the virus transmission dynamics and seroprevalence of SARS-CoV-2 in areas with high- and low density of population. The project was initiated in July.

The project is supported by the Bill & Melinda Gates Foundation (BMGF).

**2.10. COVID-19 RECONNAISSANCE INCLUDING OTHER EMERGING INFECTIOUS DISEASES THROUGH A CELL PHONE-BASED PLATFORM**

icddr,b aims to develop a cell phone-based platform to assess community response and situation on COVID-19 and selected/certain pandemic potential emerging infections. It will also help informing policy makers with real-time data.

It is supported by Centers for Disease Control and Prevention (CDC), USA.

**2.11. EFFECT OF INFLUENZA AND SARS-COV-2 INFECTION ON RECURRENT CARDIOVASCULAR DISEASE IN BANGLADESH DURING COVID-19 PANDEMIC**

The study aims to describe the effect of influenza and COVID-19 upon the clinical prognosis among patients.
hospitalised with Acute Myocardial Infarction (AMI). It will also estimate the frequency of laboratory-confirmed influenza and SARS-CoV-2 virus among patients hospitalised with AMI.

The study has enrolled 280 patients of which 36 (13 per cent) were found positive for COVID-19 as of August 2020.

The study is supported by the Orebro University, Sweden.

2.12. EVALUATION OF SALIVA AS AN ALTERNATE SPECIMEN FOR DIAGNOSIS OF SARS-COV-2

The study aims to investigate the suitability of saliva over nasal swab and/or throat swab for detection of SARS-CoV-2 from suspected patients. Starting from mid-July, 320 participants have been enrolled and saliva samples from all of them were collected. 215 of the samples were compared with RT-PCR and were found in agreement with the paired nasal swab and saliva samples.

The study is supported by the USAID.

2.13. MONITORING OF THE CIRCULATION OF SARS-COV-2 IN BATS IN BANGLADESH AND GENERATION OF CELL MODELS FOR IN VITRO STUDIES (SARSRHINCCELL)

The study will evaluate the risk of the emergence of SARS-CoV-2 by face-to-face monitoring of the virus or of the immunity induced by the virus in the populations of bats in Bangladesh (mainly Rhinolophus sp. and Pteropus sp.). It will also develop cellular tools essential to the whole community for understanding the interactions between the virus and its natural host at the cellular level. The study will be conducted in Faridpur, Sylhet, Chottogram Hill Tracts, Khulna, Rajshahi, and Dinajpur districts.

The study is supported by Inserm, France.

2.14. COMMUNITY TRANSMISSION OF COVID-19 ACCORDING TO POPULATION DENSITY GRADIENT IN AN URBAN LOCATION OF BANGLADESH

The study aims to determine the community transmission of COVID-19 in high and low population density in Dhaka. The study area is comprised of seven wards and seven slums in Dhaka North and South City Corporations. So far, 146 participants in non slum neighbourhood enrolled of which 25 found to be COVID-19 positive while 477 participants form slum neighbourhood enrolled of which 41 were positive.

The study is supported by the Bill & Melinda Gates Foundation (BMGF), USA.

2.15. COVID-19: HARNESSING AMANHI INFRASTRUCTURE TO ASSESS THE DIRECT IMPACT ON MATERNAL, NEWBORN AND CHILD HEALTH

The study aims to determine age-specific cumulative incidence of COVID-19 infection, as determined by weekly morbidity surveillance, RT-PCR in symptomatic individuals whenever possible and seroconversion among women of reproductive age and children (<seven years of age) enrolled in the AMANHI study. It will also determine the proportion of infections causing moderate or severe COVID-19 disease among women of reproductive age and children and investigate epidemiological, biological, socio-economic and nutritional status as possible risk factors for infection, and severity of disease. It also aims to evaluate the impact of asymptomatic or symptomatic SARS-CoV-2 infection on the risk of subsequent infection and severity of disease and also clinical presentation, utilisation of preventive care, complications, treatment and clinical course of disease for pregnant women or women who have delivered in the last eight weeks and are COVID-19 positive, among others. The study will be conducted in Bianibazar, Kanaighat and Jakigonj in Sylhet, Bangladesh.

The study is supported by the Johns Hopkins University, USA.

2.16. CENTRALISED LABORATORY FOR MEASUREMENT OF IMMUNE RESPONSES ELICITED BY SARS-COV-2 VACCINE CANDIDATE

The study will test immune response elicited by different COVID-19 vaccine candidates in preclinical studies as well as Phase I and II clinical studies in the same (centralised) laboratories, in parallel, establishing a common protocol or providing the data package, which allows formal bridging to a common protocol and information sharing.

The study is supported by the Coalition for Epidemic Preparedness Innovations (CEPI).

2.17. EVALUATION OF LOW-COST LOOP MEDIATED ISOTHERMAL AMPLIFICATION (LAMP) FOR THE DIAGNOSIS OF COVID-19 INFECTION IN THE RESOURCE LIMITED SETTINGS AS A MOLECULAR POINT-OF-CARE

The study aims to develop a new LAMP protocol with low cost reagents and also evaluate the existing LAMP protocols followed by scaling this in a secondary health facility as well as at the Rohingya camps in Bangladesh for Forcibly Displaced Myanmar Nationals (FDMN), which can be further implemented in any part of the world.

The study was supported by the IsDB.
2.18. SELECTIVE EXTRACTION AND CONCENTRATION OF SARS-COV-2 NUCLEOCAPSID PROTEIN FROM URINE OF COVID-19 PATIENTS USING NANOMAGNETIC PARTICLE FOR THE RAPID AND SENSITIVE DIAGNOSIS OF COVID-19

The main objective of this study is to explore urine based (non-invasive antibody-based) diagnosis of SARS-CoV-2. The study will be conducted at ‘Emerging Infections and Parasitology Laboratory’ and Bandarban field site of icddr,b.

The study is supported by the IsDB-TWAS.

2.19. NATURAL HISTORY OF COVID-19 IN FAMILIES LIVING IN MIRPUR, BANGLADESH

With support from the National Institutes of Health (NIH), USA through Johns Hopkins University, the study aims to look at the household transmission of COVID-19 in Mirpur slum children.

2.20. CITYWIDE SEWAGE SURVEILLANCE FOR SARS-COV-2 IN DHAKA, BANGLADESH

The study aims to establish sewage surveillance system in Dhaka, Bangladesh for the simultaneous quantitative detection of SARS-CoV-2 and other enteric pathogens directly from samples using a culture independent method.

The study is supported by the Bill & Melinda Gates Foundation, USA through the University of Virginia, USA.

2.21. SURVEY OF SEWAGE AND OTHER CONTAMINATED SURFACE WATER SOURCES FOR THE PRESENCE OF SARS-COV-2 IN AND AROUND DHAKA CITY

This project aims to detect SARS-CoV-2 virus RNA in the sewage and other contaminated surface water sources in and around Dhaka city.

It is supported by the Dhaka Water Supply and Sewerage Authority (Dhaka WASA).
2.22. DETECTION OF AIRBORNE SARS-COV-2 IN BANGLADESHI HOSPITALS
This study aims to detect the presence of SARS-CoV-2 in air of Dhaka’s hospitals.
It is supported by the Stanford University, USA.

2.23. A PILOT STUDY TO DEVELOP A SMARTPHONE BASED POINT-OF-CARE DIAGNOSTIC TOOL FOR THE EARLY DETECTION OF COVID-19 PATIENTS IN LOW-INCOME COUNTRIES
This study aims to develop a mobile phone app as a first line screening tool for COVID-19 patients and to observe correlation frequency of the appearance of early signs and symptoms with RT-PCR confirmed COVID-19 patients.
It is supported by the G²LM|LIC Programme, UK.

2.24. COMPARATIVE EVALUATION OF ENZYME LINKED IMMUNOSORBENT ASSAY, NESTED AND QRT-PCR ASSAY WITH CHARACTERISATION OF PERIPHERAL LYMPHOCYTE SUBSETS FOR DETECTION OF SARS-COV-2
The objective of the study is to use ELISA for detecting IgM and IgG antibodies and comparing the diagnostic feasibility and performance of the molecular and serological assays. Flow cytometry will be used to evaluate the levels of peripheral lymphocyte subsets in hospitalised COVID-19 patients after and before treatment with different medication (antiviral treatment, intravenous corticosteroid, oxygen inhalation, with immune enhancer that received immunoglobulin etc.) and their possible associations with clinical characteristics.
The study is supported by the IsDB-TWAS.

2.25. DETECTION OF NCORONAVIRUS, ROLE OF COVID-19 SPECIFIC ANTIBODIES AND DETERMINATION OF PROTECTION AGAINST INFECTION
The study aims to evaluate systemic (blood) antibody response in novel coronavirus cases of Bangladeshi participants and comparison of the antibody responses with healthy volunteers/contacts and validation of the antibody assay.
The study is supported by the USAID and the BMGF.
2.26. COVID-19 EPIDEMIOLOGY AND GENOMIC ANALYSIS

The study aims to deduce the phylodynamics of SARS-CoV-2 in Bangladesh and understand the lineage relationship with global SARS-CoV-2 strains.

On 12 October 2020, a preliminary findings dissemination seminar of the study was held.

The study shows that the epidemiologic and phylogenetic findings of SARS-CoV-2 in Bangladesh are consistent with the findings around the globe, which potentially suggests that therapeutics and vaccines that are becoming globally available will be equally effective in Bangladesh.

The study is supported by the IEDCR, Bangladesh; University of Bath, UK; and the Wellcome Sanger Institute, UK.

For more on the study please visit https://bit.ly/3jwuxlP

2.27. STATUS OF SARS-COV-2 TITRES IN WASTEWATER AS FORECASTER OF THE PREVALENCE OF SARS-COV-2 INFECTION BEFORE CLINICAL DIAGNOSIS

The study aims to isolate and determine SARS-CoV-2 in wastewater samples from highly reported infected zones also from reported infected zones in Dhaka to establish a surveillance system to control and take measures for outbreak of novel coronavirus or similar viruses.

The study is supported by UNICEF.

2.28. RAPID ANTIGEN TESTS TO DIAGNOSE COVID-19 IN AN URBAN COMMUNITY OF DHAKA

With support from Global Affairs Canada (GAC), the study aims to assess the utility of rapid antigen detection tests for the diagnosis of COVID-19 among patients and to compare the results with the gold standard, real-time RT-PCR using nasopharyngeal swabs from residents of Mirpur, Dhaka.
2.29. ENHANCED COVID-19 CASE IDENTIFICATION USING THE DGHS TELEMEDICINE

The study aims to track and follow-up presumptive cases of COVID-like illness using the DGHS’ free 24/7 telemedicine service from qualified doctors (ShasthoBatayon). The patient follow-up to be used to direct confirmatory testing, support geolocation of cases, and back the quarantine and isolation strategies.

This study is also supported by Global Affairs Canada (GAC).

2.30. RAPID ASSESSMENT OF HEALTH SYSTEMS IMPACT OF COVID-19 ON URBAN SLUM DWELLERS

With Sida support, this study aims to explore the health seeking behavior of urban slum dwellers in Dhaka with particular focus around the MNCH and chronic illness, and will assess access to information and Knowledge, Attitude and Practice (KAP) around preventive measures for COVID-19. It will further explore challenges faced by healthcare providers in providing healthcare to urban slum dwellers during pandemic, and explore medium and long-term consequences on urban slum dwellers for future research. The study will be conducted in five urban slums of Dhaka North and South City Corporations under icddr,b’s Urban Health and Demographic Surveillance System (UHDSS).

This project is supported by Sida.

2.31. RAPID ASSESSMENT OF THE IMPACT OF COVID-19 ON THE FOOD ENVIRONMENT AND MENTAL HEALTH OF RESIDENTS LIVING IN URBAN INFORMAL SETTLEMENTS IN DHAKA CITY

The study will explore the impact of COVID-19 pandemic on the food environment of low-income urban population of Dhaka, and will assess the impact of the pandemic on the mental health and related health seeking behaviour of low-income urban population of Dhaka. It will also explore the feasibility of practicing recommended COVID-19 prevention measures at household-level among the low-income urban population. The study will take place in Korail, Mirpur, Shampur, Dholpur, and Tongi-Ershadnagar slums of Dhaka.

This project is supported by Sida.
2.32. MENTAL HEALTH CONDITION OF FRONTLINE DOCTORS WORKING WITH COVID-19 PATIENTS IN BANGLADESH

The aim of the study is to assess the status of depression, anxiety and stress among the physicians in Bangladesh and the coping mechanisms during the period of COVID-19. It will be based on online survey with interested physicians who have joined in different Facebook platform groups.

The study is supported by the European Union.

2.33. EXPLORING THE FEASIBILITY AND ACCEPTABILITY OF ONLINE DOCTORS’ CHAMBER IN BANGLADESH

The objective of the study is to develop an application that will be used as Online Doctors’ Chamber and explore its feasibility and acceptability in Bangladesh.

The study is supported by the European Union.

2.34. SOCIAL AUTOPSY OF COVID-19 DEATHS AND SURVIVORS IN BANGLADESH

The study aims to capture experience of the COVID-19 positive patients, both survivors and also those who later died in hospital or out of hospital (home or in transition), in accessing social and health services at different stages of the disease and finally funeral services. The study will be conducted in Dhaka and Narayanganj districts.

The study is supported by the European Union.

2.35. OPPORTUNITY COSTS FOR PRIMARY HEALTHCARE LEVEL MATERNAL AND CHILD HEALTHCARE SERVICES DUE TO COVID-19 PANDEMIC IN BANGLADESH

The project aims to understand the rate and extent of the reduction of utilisation of routine MNCH care services, reasons behind reduced utilisation of MNCH care services and identify actionable measures to sustain high coverage of MNCH services in future public health emergencies. The study will use secondary data sources (DHIS2, HDSS) for quantitative analysis. National data will be validated in four study sites- Dacope (Khulna), Chowgacha (Jashore), Matlab (Chandpur) and Chakaria (Cox’s Bazar). Qualitative interviews will be conducted from two areas of the selected four study sites depending upon maximum service loss.

The study is supported by the World Health Organization (WHO) and the CDC, USA.
3.1. IVERMECTIN AND DOXYCYCLINE IN COMBINATION OR IVERMECTIN ALONE FOR THE TREATMENT OF ADULT BANGLADESHI PATIENTS HOSPITALISED FOR COVID-19

The aim of this randomised, double-blind, placebo controlled trial is to evaluate the efficacy and safety of ivermectin in combination with doxycycline or ivermectin alone for the treatment of hospitalized SARS-CoV-2 infected adult Bangladeshis who tested positive for COVID-19. If successful, it may have the potential to play an important role in the treatment of COVID-19 positive patients. The study is ongoing in three hospitals of Dhaka. Currently, data analysis is underway.

The trial is supported by Beximco Pharmaceuticals Limited, Bangladesh.
THE COVID-19 TREATMENT

4.1. icddr,b in partnership with the UNICEF is supporting a 200-bed isolation and treatment centre in Teknaf Upazilla in Cox’s Bazar District to provide critical care for COVID-19 patients from both Bangladeshi and Forcibly Displaced Myanmar National (FDMN) communities.

The Severe Acute Respiratory Infection Isolation and Treatment Centre (SARI ITC) was inaugurated on 31 August 2020 and is providing COVID-19 diagnosis and clinical care including oxygen therapy for severely ill patients from both Bangladeshi and FDMN communities in Teknaf Upazilla. It operates 24 hours a day and is served by over 300 highly trained and dedicated frontline workers, including doctors, nurses, patient care attendants, laboratory technicians, pharmacists and cleaners.

Critically ill patients requiring mechanical ventilation will receive initial treatment and then be referred to intensive care facilities in the district hospital. An incinerator has been installed for safe disposal of waste materials. Additionally, the centre is undertaking awareness programmes to prevent the spread of COVID-19 disease.

4.2. Nutrition and Clinical Services Division of icddr,b has provided capacity development training to local health service providers on the critical case management of patients suffering from COVID-19; rational use of Personal Protective Equipment (PPE) and infection prevention control. It also included management of medical equipments efficiently.

4.3. icddr,b’s clinical response team has been phenomenal in providing COVID-19 care to staff, their dependents and family members living with them and support staff. As of 12 September 2020, 1,229 individuals tested COVID-19 positive and received treatments either through telemedicine or at isolation and treatment wards established at icddr,b Mohakhali Campus. This number includes 446 staff, 721 dependents and family members, and 62 others (ARMAC and Co-operative staff). All individuals tested positive regardless of their service contract status received treatment and follow up care.

Specialised tents have been erected to take care of critically ill staff and hospital patients. The Day Care Centre has been converted into an Isolation Unit with separate wards for male and female staff while the Cafeteria has been converted into a makeshift ward. Among the COVID-19 positives, 119 were critically ill and received treatment at the isolation and treatment wards.
5.1. icddr,b and partners have supported the livelihood (i.e. foodstuff) of transgender women (locally known as Hijra) and other gender and sexually diverse people. 3,722 individuals under 53 service delivery centres in 36 districts of Bangladesh have received the support. This is supported by the German Doctors.

5.2. icddr,b staff voluntarily donated cash assistance to Bidyanondo Foundation, a non-profit organisation, which provides support to local, underprivileged communities.

5.3. icddr,b staff also voluntarily donated cash assistance to the Prime Minister’s COVID-19 relief fund.
6.1. STAY-AT-HOME ORDERS HAVE ECONOMIC AND SOCIAL COSTS FOR POOREST FAMILIES

A new icddr,b study has documented that families with low socioeconomic status – and particularly women – experienced financial hardship, food insecurity, domestic violence and mental health challenges during COVID-19 stay-at-home (lockdown) measures in Bangladesh.

Scientists at icddr,b and the Walter and Eliza Hall Institute (WEHI), Australia have documented the impacts of the COVID-19 pandemic and associated stay-at-home measures on the wellbeing of women and their families in rural Bangladesh. The study found that low socioeconomic families experienced a range of economic and mental health challenges during the two-month stay-at-home order, and women reported an increase in intimate partner violence.

Like many countries around the world, Bangladesh used stay-at-home (or lockdown) orders to prevent the spread of COVID-19 during late March to May 2020. Using an existing research network in Bangladesh, the study team was able to track the impact of the lockdown on financial stability, food security, mental health and domestic violence in 2,424 families in Rupganj, Bhulta and Golakandail unions of Rupganj Upazila under Narayanganj District.

The study revealed that 96 per cent of families had experienced a reduction in their average monthly earnings and 91 per cent considered themselves to be financially unstable. Indeed, during the lockdown, 47 per cent of families saw their earnings drop below the international poverty line of BDT 160 (USD 1.90) per person per day and 70 per cent experienced food insecurity, with 15 per cent running out of food, going hungry or missing meals.

The lockdown also had mental health impacts, with women showing an increase in depressive symptoms, and 68 per cent of participants reporting that their anxiety level had increased. It is of concern that among the women who reported emotional, physical or sexual violence from their intimate partners, more than half reported that violence had increased since lockdown.

The article is available under the following link - https://bit.ly/3kghlMZ

6.2. COVID-19–RELATED INFODEMIC AND ITS IMPACT ON PUBLIC HEALTH: A GLOBAL SOCIAL MEDIA ANALYSIS

Infodemics, often including rumours, stigma, and conspiracy theories, have been common during the COVID-19 pandemic. Monitoring social media data, has been identified as the best method for tracking rumours in real time and as a possible way to dispel misinformation and reduce stigma. However, the detection, assessment, and response to rumours, stigma, and conspiracy theories in real time are a challenge.

Therefore, a study team including an icddr,b staff member who is pursuing his PhD in Australia, followed and examined COVID-19-related rumours, stigma, and conspiracy theories circulating at online platforms, including fact-checking agency websites, Facebook, Twitter, and online newspapers, and their impacts on public health.

Information was extracted between 31 December 2019 and 5 April 2020, and descriptively analysed. The study team has performed a content analysis of the news articles to compare and contrast data collected from other sources. They have identified 2,311 reports of rumours, stigma, and conspiracy theories in 25 languages from 87 countries. Claims were related to illness, transmission and mortality (24 per cent), control measures (21 per cent), treatment and cure (19 per cent), cause of disease including the origin (15 per cent), violence (1 per cent), and miscellaneous (20 per cent). Of the 2,276 reports for which text ratings were available, 1,856 claims were false (82 per cent). Misinformation fueled by rumours, stigma, and conspiracy theories can have potentially serious implications on the individual and community if prioritised over evidence-based guidelines. Health agencies must track misinformation associated with COVID-19 in real time, and engage local communities and government stakeholders to debunk misinformation.

The article is available under the following link - https://bit.ly/3lkDnEN
IN THE NEWS

The Hindustan Times  |  18 June 2020
Bangladesh launches clinical trial of two-drug combination to treat Covid-19

CNN  |  11 AUGUST 2020
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Facebook funnelling readers towards Covid misinformation - study
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Lockdowns have economic and social costs for world’s poorest families
https://bit.ly/2JOVXHx

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Tufts University to lead $100M program to reduce risk of zoonotic viral spillover, spread
https://bit.ly/2U5gKs3

The Gates Notes  |  06 OCTOBER 2020
A hero in the fight against the world’s longest-running pandemic
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