Country Preparedness and Response Plan

Draft V1, 26 March 2020

This is an iterative Plan which will be continuously updated with the rapidly evolving situation and as new data becomes available globally and in Bangladesh

1. Understanding COVID-19 impact: A *deadly disease that spreads faster than we can respond*

The COVID-19 pandemic has emerged as the world's population exceeds 7.7 billion people, with high contact rates and international movements fueling global spread. Given the extraordinary human densities in Bangladesh, globally accepted modeling techniques and parameter assumptions forecast the impact of COVID-19 without interventions between half a million up to 2 million lives lost during the epidemic wave. These figures are not surprising when considered against modeling in other countries but they are astounding and should serve as a call to action. The challenges in Bangladesh are compounded by a weak health system and the risks of a complete saturation of the health system early in the epidemic, leaving patients in severe or critical condition from COVID or other conditions without adequate health care facilities throughout much of the epidemic. Exposure of healthcare workers is also forecasted to be rampant given current infection prevention control practices, lack of PPEs, and extremely high patient densities in secondary and tertiary care hospitals.

Modeling of interventions indicate that conventional social distancing tools for mitigating infectious disease outbreaks, such as case isolation, school closure, or home quarantine (i.e. lockdown) alone will be insufficient to flatten the curve enough to preserve intensive care capacity. Only a combination of all interventions simultaneously, referred to as "suppression", is expected to provide sufficient reduction in contract rate to blunt the epidemic. The impact of any suppression strategy is dependent on two factors: timing and the ability to diagnose cases. Due to exponential growth rates of the epidemic, each day that passes before interventions are implemented results in an exponential increase in case burden and a significantly lower likelihood that the suppression interventions will thwart the outbreak. The ability to diagnose cases is also an essential requirement for the case isolation intervention, so without rapidly expanded testing capacity, the positive impact of this intervention is hampered.

2. Current situation assessment: A *window of opportunity*

1. The precise number of COVID-19 cases is unknown, but estimated to be significant given official reports, anecdotal evidence, and modeling predictions.

2. While preparedness has improved in selected facilities at the national level, PPE supplies remain scattered with healthcare workers and facilities generally unprepared for managing suspect and confirmed COVID-19 cases.
3. COVID-19 testing capacity for COVID-19 is still limited and not available nationwide.
4. An estimated 9 million people moved out of Dhaka ahead of the 26 March shutdown. This most likely dispersed incubating and infectious individuals throughout the country. While accelerating the spread of the disease around the country, the burden of growing clusters within Dhaka has lessened and case burden may now be more evenly distributed nationally.
5. Due to the combined social distancing impact of school, business, and public transport closure nationally, COVID-19 reproductive rate (spread rate) will be at its lowest level since introduction to Bangladesh.
6. A dynamic and relatively young health workforce is available for immediate activation nationally through government (MOHFW, Community Clinics), NGO (BRAC, Platform), and University (medical students) sectors.
7. A high level of cooperation amongst telecommunication operators coordinated by a central information management initiative, A2i, offers the opportunity for harnessing real-time big data for supporting social distancing, case identification, and home isolation interventions.

3. **Suppression strategy:** B*reak transmission at community level and buy time to prepare health facilities*

Although testing facilities are not yet available nationally, actions can still be taken with available resources to further reduce viral transmission rates by improving isolation of the cases and their families. The specific strategy is as follows:

1. Initiate immediate nationwide case searching and identification utilizing existing community networks as well as telecom based reporting via 333. Individuals with symptoms will be evaluated and those who meet the clinical criteria will be isolated at home with their families with the full support of Community Support Teams compromised of MOHFW Community Clinic, BRAC community health, and Platform medical student and intern doctor staff and volunteers. Home isolation will be monitored remotely and reinforced as necessary for those who leave their homes. The Community Support Team will also facilitate access to hospital care for those who develop severe disease.
2. All available real-time diagnostic testing facilities will be rapidly assessed for capability of deploying COVID-19 testing. Procurements will be initiated for currently know systems and a second procurement wave will be launched following the rapid assessment. Expanded testing capacity not only enables better intelligence of the disease situation nationally, but also more precision for identifying those individuals and families whom need to remain in home quarantine.
3. Procurements will be launched immediately for healthcare worker PPE and hospital equipment and supplies required to expand care of critically ill and severe

patients. Due to global supply chain shortages, locally manufactured solutions are being explored and will be fully utilized.

4. Healthcare worker training programmes will be launched nationwide for improving triage, infection prevention control, and case management. Recently graduated intern doctors will also be mobilized to support triage at hospitals with highest case burdens.
5. Risk communication will focus on empowering communities to stop the spread of COVID-19 through their collective action, particularly support for those with suspected infections to support those infected who have the potential to stop further transmission of the virus in their communities.
6. Advocacy for maintaining social distancing measures will continue until sufficient testing capacity is established to assess rate of spread. When rate of spread has sufficiently decreased and hospitals are better prepared, distancing restrictions may be periodically lifted. Based on current model projections, this would need to continue until either an efficacious vaccine or treatment is widely available. This is a novel coronavirus and Bangladesh is learning from other countries who are implementing suppression interventions to stop the epidemic.

4. **Immediate call for funds:** *Procure as much as possible, as fast as possible*

Overall funding needs to implement the COVID-19 Country Preparedness and Response Plan are currently estimated to be US$378 million. Of this amount, nearly US$300 million is requested in the first call for funds due to the significant procurement needs to sufficiently equip and supply the health care system for the anticipated influx of severe and critical COVID-19 cases. Given the pandemic affecting so many countries simultaneously, it is recognized that global supply chains may not be able to meet this demand. The most urgent needs within each pillar are summarized below.

Pillar	**Immediate needs**
Surveillance and laboratory support	**Activate all available testing capacity** Rapid assessment of all available real-time testing capacity in country followed by training of laboratory staff in testing and biosafety SOPs and training of sample collectors in safe sampling and transport.
Contact tracing and Point of Entry (POE) screening	**Initiate national case finding** Expansion of the nationwide case identification and establishment of mobile phone case tracking system. **POE** Strengthening POE screening and case tracing at remaining POEs.
Case Management and infection prevention control (IPC)	**IPC** Introductory training, including on donning and doffing of PPE for healthcare workers in all districts (30 participants, 2 trainings). This includes triage, isolation, and WASH.

	ICU Training in case management of critical and severe COVID-19 cases.
Risk communication and community engagement	**Imams as change agents** Capacity development and giving the imams alternates to the changed the practice of avoiding large gatherings). **Information flow** Establish a flow of crisis communication actions at District, Divisional and National level in event of Rumor/COVID 19 Event & a Risk Communication Plan Development. **National hotline** Strengthening Hotline Centre, including infrastructure strengthening, server management, app and web management, course management, volunteer management, incentives and appreciation. **Hand washing** Installation of hand washing station outside 7,000 Community Clinics and BRAC offices. **Miking** Disseminate awareness information and messaging on self-reporting and social distancing within communities.
Logistics and procurement	**Testing** Sampling and testing supplies for first month, procurement of additional testing equipment (US$ 4M), following by testing supplies for subsequent two months (US$ 20.5M). **PPE** Surgical masks, N95 masks, eye protection, hand sanitizer, and disinfectant. **Inventory** Rapid development of real-time inventory and supply chain management system. **Hospital equipment** Initiate immediate procurements based on local and global stock availability.

Annex. Itemized list of needs in first call for funds

Pillar	*Activity description*	SUM of Sub Total
Case management and IPC	Case management and IPC pillar coordination	$ 72,000
	Covid -19 ICU Work Group (Online Facility)	$ 117,960
	Development of case information management (record) system	$ 100,000
	Development of guideline on case management (including referral system)	$ 20,000
	Development of guidelines/algorithm and SOP on rational use of IPC	$ 20,000
	Development of microplan and committee/command system at health facilities from UHC up to tertiary hospitals	$ 1,400,000
	Development of triage algorithm for suspect and COVID-19 case	$ 20,000
	Engage newly completed intern doctors (8000 approximate) in triage at busiest hospitals	$ 2,832,000
	Intern doctor training programme	$ 176,471
Immediate need	Introductory training IPC, including on donning and doffing of PPE for healthcare workers in all districts (30 participants, 2 trainings). This includes triage, isolation, WASH.	$ 451,764
	Provision of ambulance service in all districts for COVID-19 patients	$ 1,200,000
	Surge capacity (accommodation and transport for doctors, nurses and medical technologists from other districts/hospitals)	$ 600,000
	Training on case management in all districts (30 participants, 2 trainings)	$ 451,764
Immediate need	Training on critical case management for critical care doctors, pulmonologists, and ICU staff in all districts	$ 451,764
	Training on mild to moderate case management for healthcare workers	$ 451,764
Immediate need	Training on severe case management for doctors and nurses	$ 451,764
	Training on waste management of PPE and infectious materials in all districts (30 participants, 2 trainings)	$ 451,764
	Case management-IPC sub-total	**$ 9,269,017**
Information management	Bi-weekly pillar coordination meetings	$ 24,000
	Daily sitrep meetings	$ 18,000
	Internet, electricity, security for Situation Room	$ 6,000
	IT equipment of Situation Room	$ 10,000
	Report publication	$ 6,000
	Situation Room construction works	$ 15,000
	Situation Room ICT dashboard development	$ 25,000
	Technical and operational support to Situation Room and Response Coordinator	$ 75,000

	Travel support	$ 12,000
	Weekly PMO briefing	$ 12,000
	Information management sub-total	**$ 203,000**
Logistics and procurement	Additional biosafety cabinets for expanded sample processing	$ 350,000
	Additional human resource to manage supply chain from different stakeholders	$ 11,550
	Ambulance for each POE	$ 57,150
	Autoclave	$ 4,329,520
	Biohazard bag	$ 25,011,360
	Capacity enhanchment for central medical store depot	$ 200,000
	Case management and IPC pillar coordination	$ 24,000
	Closed colored bin	$ 44,048
Immediate need	Create shared portal for information and dissemination on supply chain	$ 200,000
	CV line cannula, 3000 units	$ 4,200
	Disposable gloves	$ 2,635,380
	Disposable gloves for lab staff and sample collectors	$ 207,900
	Equipment, supplies and logistics support for POE (disinfectant, face mask, biohazard bag, disposable gloves, hand sanitizer)	$ 600,000
	Expand ICU beds nationwide	$ 9,400,000
Immediate need	Eye protection for lab staff and sample collectors	$ 2,920,500
Immediate need	Goggles for health facilities	$ 39,049,740
Immediate need	Hand disinfectant sprayer	$ 518,028
	Hand held thermometer for POE screening	$ 26,235
Immediate need	Hand sanitizer for health facilities	$ 18,943,956
Immediate need	Handheld thermometer	$ 715,500
Immediate need	High capacity RNA extractor	$ 225,000
	Infusion pump, 4000 units	$ 3,296,000
	International case management specialists international	$ 447,000
	International IPC specialists	$ 223,500
	IT Equipment for lab staff (40 phones)	$ 40,000
	IT Equipment for laboratories (30 computer)	$ 60,000
	Large medical oxygen cylinders	$ 1,000,000
Immediate need	Masks for health facilities	$ 13,378,500
	Medications (protocol, inotropes, sedative, antibiotic, fluid)	$ 5,900,000
	Meeting with large scale suppliers for high demands	$ 20,000
Immediate need	N95 mask for healthcare workers	$ 1,482,750
Immediate need	N95 masks for lab staff and sample collectors	$ 585,000
	Oxygen concentrator, 8400 units	$ 39,480,000
Immediate need	PCR machine and maintenance (20 machines)	$ 1,200,000
Immediate need	PPE for isolation unit biosafety	$ 8,932,000
Immediate need	PPE for makeshift OPD	$ 20,600,000
	Prepare SRO for simplified procurement process. port and	$ -

	customs clearance	
	Printing and dissemination of guideline on case management, SOP and job aids (5000 copies)	$ 100,000
	Printing and dissemination of IPC guideline, SOP and job aids (5000 copies)	$ 50,000
	Printing and dissemination of triage algorithm and job aids (5000 copies)	$ 30,000
	Procure Gene Expert COVID-19 kits (once available) for POC diagnosis of critical and severe SARI patients	$ 300,000
	Production of health self-declaration for all arriving international passengers	$ 10,000
	Pulse oxymeter with cardiac monitoring, 7800 units	$ 18,720,000
	Reach out to garment industries for mask and gowns	$ -
Immediate need	Reagents and laboratory consumables for first month	$ 2,000,000
	Reagents and laboratory consumables for second and third months	$ 20,530,000
Immediate need	RNA extractor and maintenance (20 machines)	$ 60,000
	Sample transport cool boxes	$ 180,000
Immediate need	Screening equipment of case searching and contact tracing (Handheld IR thermometer)	$ 795,000
	Secure special permit from the GOV for emargency transport of medical and food items	$ -
Immediate need	Sodium hypochlorite (bleach) 1L	$ 832,572
	Syringe pump, 6000 units	$ 4,230,000
	Ventilators, 1500 units	$ 22,500,000
	Viral sequencing machine (one machine)	$ 230,000
Immediate need	Viral transport media with swabs	$ 760,000
	Logistics and procurement sub-total	**$ 273,447,010**
Risk communication and community engagement	Awareness raising among tea garden managers and workers and their families on prevention measures and raising awareness. Work together with C4D, UNICEF Sylhet office and UN Partners (ILO, UNWOMEN, UNFPA and UNRC office)	$ 10,000
	Bulk SMS and Grameen Phone Message	$ 100,000
	Children in inst: Providing hand washing and preventive messages to the children and the staff. 2. Develop clear roles and responsibilities of the staff, caregivers, management and children in the institutions based on the international standards and considering country context including provision of isolation/quarantine and medical check up. 3. Supply of soaps/sanitizers and sterilizing spray etc to the institutions. 4. Orientation of the staffs and children	$ 60,000
Immediate need	Communication cost (mobile bill and transport cost) of CHWs for Case findings	$ 95,000
Immediate need	Engage Imams as change agents - through the IFB is a government network of 500,000 registered imams across the country (Capacity Development and giving the imams alternates to the changed beh practice of avoiding larget	$ 200,000

	gatherings).	
Immediate need	Establish a flow of crisis communication actions at District, Divisional and National level in event of Rumor/COVID 19 Event & a Risk Communication Plan Development	$ 400,000
	Establish a One Stop Communication Data Repository - An easily accessible communication point for the different stakeholders to get information (As noted above for the diff groups) + information on Case Reporting; Suspected Cases, Testing and Treatment Facilities	$ 50,000
	Establish Feedback mechansim(s) to collect feedback on the services and risk communication and community engagement activities	$ 300,000
	For Adolescents and Youth: - Social media outreach through visual posts and videos addressing preventive behaviors, anxieties and their role in preventing the spread of the virus - Use the opportunities of working with local Champions/Youth Ambassadors and large scale networks of adolescents and youth (through the Grameen, FB partnerships; Scouts etc) to support prevention and control efforts	$ 200,000
	For Children: (Inputs - Visual e-learning materials for children; Social media post creatives & Animated videos for children (including using the MEENA Cartoon) - Support adoption of key prevention behaviors by children as well addressing anxieties that they may have through online / in classroom sessions by teachers and/or psychosocial support - Messaging through TV shows that are popular with children - Social media outreach through Social Media – visual posts as well as videos for children including a focus on how to spend your time at home and away from school in positive ways. - Safe ways to engage children to share their experiences and constructive ideas on what to do at home	$ 100,000
	General Population - personal hygiene - handwashing, self-protection, and protect others through Posters; leaflets; PSA and Radio spots; Mass media; Social media; Digital media; News scrolls and Community Radio (Phased Approach - Phase 1 by end March) Boosting of Face Book Posts	$ 400,000
	HCP - through the district level committees under the leadership of the Civil Surgeons disseminate messages on safety and protection and energize in discharging their responsibilities (Phased Approach - Phase 1 by end March)	$ 200,000
Immediate need	Installation of hand washing station outside 7000 Community Clinics & BRAC offices	$ 160,000
	Mapping of Target Population, Key Channels of Communication and RCCE partner IEC activities to identify gaps, ensure consolidation of resources with minimum duplication and maximum amplification across the different	$ 250,000

	geographic locations - Identify trusted community groups (local influencers such as community leaders, religious leaders, health workers, community volunteers) and local networks (women's groups, youth groups, business groups, traditional healers, etc.)	
	Messages for High Risk Groups (people older than 70 years of age) and Patients with co-morbidities	$ 400,000
	Messages for Persons in self-quarantine and isolation	$ 500,000
Immediate need	Miking @ local level to disseminate awareness information among community people	$ 210,000
	Produce and place newspaper advertisements	$ 100,000
	Produce and place radio PSAs	$ 100,000
	Produce and place television public service announcements (PSAs)	$ 280,000
	Promoting handwashing and coughing etiquette messaging on social media and our website since 29 January and will continue to use this medium for future messages . 15 million people have been reached to date.	$ 75,000
Immediate need	Protective Equipment for CHWs & and health care workers	$ 135,000
	Rapid Emergency Polls Rapid, short quantitative survey of the audience - Polls allow us to identify what fraction (percentage) of the audience has certain experiences and holds certain views - Polls allow us to then analyze relationships between knowledge, experiences, views and actions quantitatively - The poll findings will be shared with the RCCE partners for bringing any changes in programmes if needed	$ 300,000
Immediate need	Response messages for social media (how to recognize symptoms, how to protect people around you, when to see a doctor). PSAs on both prevention and response to TV and radio	$ 50,000
Immediate need	Social media posts that guide parents on how to talk to their children about Covid-19, and also posts that encourage parents to be kind and gentle, to stay calm, and to prevent violence at home.	$ 300,000
	Sticker - nationwide distribution - 50 lacs quantity	$ 100,000
Immediate need	Strengthening Hotline Centre (Infrastructure strengthening, Server Management, App and web management, course management, volunteer management, incentives and appreciation)	$ 800,000
	Surveys through social media/phone to assess if people are being reached, can recall key messages and are practicing key behaviors	$ 50,000
	Risk communication and community engagement subtotal	**$ 5,925,000**
Surveillance and laboratory support	Active case finding in health facilities or suspect cases such as SARI/ILI in PIP and NICs sentinel sites	$ 30,000
	Adverse Drug Reaction (ADR) monitoring regarding COVID-19 treatment	$ 20,000
Immediate need	Certification of existing biosafety cabinets	$ 20,000
	Data management and analytical capacity in to inform	$ 75,000

	MOHFW decision making (10 national consultants, 6 months)	
Immediate need	Develop, review and disseminate SOPs for the molecular detection of COVID-19	$ 20,000
	External quality assessment of the laboratory tests (4% of samples)	$ 20,000
	National consultant - Monitoring quality of in vitro diagnostics and other devices	$ 11,550
	Online reporting of laboratory results to national authorities and WHO	$ 12,000
Immediate need	Rapid inventory and assessment of national real-time PCR testing capacity followed by lab staff training of suitable lab sites	$ 50,000
Immediate need	Rapid sample collector field training programme	$ 50,000
	Specimens transport from health facilities/quarantine facilities/specimen collection points to testing laboratories	$ 300,000
	Surveillance and laboratory pillar coordination support	$ 72,000
	Training of staff involving in specimen collection and transport, for safe specimen collection and safe transport (2 trainings, five batches, 150 laboratory technician)	$ 88,235
Immediate need	Training on biosafety and biosecurity and laboratory biosafety protocols in four referral laboratories (two trainings of 30 participants)	$ 14,118
	Training on evidence based surveillance to enhance case detection in all districts (2 tranings, 30 participants)	$ 225,883
Immediate need	Training on RT-PCR (eight trainings, 30 participants)	$ 14,118
Immediate need	Two international laboratory specialists	$ 111,750
	Surveillance and laboratory support subtotal	**$ 1,134,654**
Contact tracing and POE screening	Alert system in place at POEs, HCF (especially major hospitals) and communities (10 national consultants, 3 months)	$ 37,500
Immediate need	App development for online data collection and management	$ 200,000
Immediate need	Case and contact mobile tracking system	$ 250,000
	Communication and awareness raising with border communities	$ 250,000
Immediate need	Contact tracing from each POE	$ 400,000
	Cross border collaboration exchange on COVID-19 spread	$ 50,000
	Design and rehabilitation of isolations units at each PoE	$ 100,000
	Designing and dissemination of materials on contact tracing	$ 100,000
	Develop and/or update and disseminate guidelines on isolation mechanisms at different levels	$ 20,000
	Inter-agency taskforce coordination for POE	$ 30,000
Immediate need	International epidemiologist to support contact tracing and POE screening	$ 55,875
Immediate need	Mobilization of BRAC and Platform health care community for contact tracing and checkpoint monitoring for suspect case identification	$ 4,500,000
	Provide trainings to MOHFW rapid response staff at national	$ 352,941

	and subnational levels on sample collection of respiratory pathogens (300 persons in 10 batches)	
	Resource support for filling and data entry of tracking forms for enter and exit at POE	$ 387,000
	Supplementary contact tracers in each district (5 per district)	$ 1,200,000
	Support for health and other sector staff (nurse and doctor) at POE/transport with food and accommodation	$ 18,000
Immediate need	Technical support for contact tracing and POE screening	$ 37,500
	Contact tracing and POE screening subtotal	**$ 7,988,816**
Grand Total		**$ 297,967,497**