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National Preparedness and Response Plan for COVID-19, Bangladesh

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Directorate General of Health Services
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Glossary of Terms

BSL	: Biosafety Level
CDC	: Communicable Disease Control
CFR	: Case Fatality Rate
DHGS	: Directorate General of Health services
COVID-19	: COVID-19 Acute Respiratory Disease virus disease
GDP	: Gross Domestic Product
GIS	: Health Information System
HMN	: Health Metric Network
HNP	: Health, Nutrition and Population sector
HNPSP	: Health, Nutrition and Population Sector Programme
HPSP	: Health and Population Sector Programme
HR	: Human Resource
HSIA	: Hazrat Shahjalal International Airport
IATA	: International Air Transport Association
ICT	: Information Communication Technology
IEDCR	: Institute of Epidemiology, Disease Control and Research
IHR	: International Health Regulation
IPC	: Infection Prevention and Control
IPH	: Institute of Public Health
JTC	: Joint Technical Committee
KGH	: Kurmitola General Hospital
MIS	: Management Information System
MOH	: Ministry of Health
MoHFW	: Ministry of Health and Family Welfare
MoLGRD&C	: Ministry of Local Government, Rural Development and Cooperatives
NMTF	: National Multi-Sectoral Task Force
OP	: Operational Plans
PHC	: Primary Health Care
PHEIC	: Public Health Emergency of International Concern
PIP	: Program Implementation Plan
PoEs	: Points of Entry
PPE	: Personal Protective Equipment
R&D	: Research and Development
RAGIDA	: Risk Assessment Guidelines for Diseases Transmitted on Aircraft
SARS	: Severe Acute Respiratory Syndrome
SMS	: Short Message Service
SOPs	: Standard Operating Procedures
SWAp	: Sector-wide Approach
USD	: United States Dollar
WHO	: World Health Organization

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Executive summary

COVID-19 is a novel corona virus that emerged in China in 2019. Coronaviruses are zoonotic viruses that circulate amongst animals and spill over to humans from time to time and have been causing illness ranging from mild symptoms to severe illness.

On 7 January 2020, Chinese authorities confirmed COVID-19 and on 30 January 2020, the Director-General of WHO declared the COVID-19 outbreak a Public Health Emergency of International concern (PHEIC). As of 16 March, 2020¹, a total of 167,511 confirmed cases and 6,606 (CFR 4%) deaths in 152 countries.

Few countries of South and South East Asia have reported COVID-19 with few cases reported from each of the countries. 16 March, 2020, eight (8) countries in South East Countries (Indonesia, Maldives, Bangladesh, Bhutan, Thailand, Sri Lanka, Nepal and India) and Pakistan of South Asia have reported confirmed cases.

As of 17 March 2020, 8 Bangladesh citizens diagnosed confirmed COVID-19 cases. Subsequently some other persons with history of exposure were quarantined. Few dozen samples were tested in Bangladesh for COVID-19 and all were found to be negative. As of 28th February 2020, there is no reported COVID-19 case in Bangladesh.

WHO has assessed the risk emphasized that all countries should be prepared for containment, including active surveillance, early detection, isolation and case management, contact tracing and prevention of onward spread.

It has been proven by numerous experiences that the ability to effectively respond to a 'threat' is strongly influenced by the extent to which such threats have been assessed in advance and prepared for with corresponding prevention and mitigation measures.

Preparedness planning for health emergencies aims to reduce the burden associated with the health threat in terms of mortality and morbidity, hospitalizations and demand for health care goods and services; to maintain essential services, protect vulnerable groups, minimize economic and social disturbance and enable a quick return to normal conditions.

The goal of the plan is prevention and control of COVID-19 in Bangladesh to reduce impact on the health, wellbeing and economy of the country. The objective of the plan is the prevent entry of the disease in the country and in case of importation to prevent or limit local transmission.

To facilitate planning and identify response levels, 4 country levels have been identified according to COVID19 infection status. Under each level, the risk assessment should be conducted to determine/maintain/change the response level.

The country will implement the activities under a national plan through committees from the national up to the upazila level with multisectoral involvement representing the relevant ministries and national and international organizations and development partners. The plan includes mechanism for developing surge capacity to manage the patients, to sustain essential services and to reduce social

¹ Who Coronavirus disease 2019 (COVID-19) Situation Report – 39; <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>

Impact.

The response strategy and actions will have to be continuously reviewed and adjusted as necessary to ensure efficient use of financial and human resources for the effective response to the outbreak, and to be reflective of any new information, R&D advances, good practices internationally and updated recommendations from WHO.

Disease surveillance with response is an important component for prevention and control of transmission. The country has started screening at PoE and has successfully done quarantine of a large number of persons exposed to the epicenter of the disease Wuhan. The country will implement the plan through over 500 committees in the country.

There will be Rapid Response Committees (RRC) along with RRT from national to upazila level responding to outbreak and overseeing quarantine and isolation at home, facilities or community. If warranted social distancing along with limiting or inhibiting social gathering including school closure will be instituted.

Though three hospitals of Dhaka city (Kurmitola, Kuwait Moltree and IDH) have been selected for managing the patients in isolation, but around 500 hospitals will be prepared for initial care of the COVID-19 patients with mild illness.

Based on aggravation of the situation, high dependence service along with ICU facilities will be strengthened. Emphasis will be given for prevention of hospital acquired infection and protection of the care giver both at the health care facility, home and the community. Emphasis will be given for prevention of catastrophic health expenditure with the principle of 'No One is Left Behind' and social and gender inclusion.

Strong concerted efforts will be taken for risk communication nationally and locally using all media and means of IEC/BCC materials. In case of quarantine specially during community quarantine, measures will be taken to ensure basic needs of the people and security of property of people in general and the care givers through active involvement of the law enforcing agency.

Sufficient budget allocation along with political commitment from the highest level will be of paramount importance for successful implementation of the plan.

Section 1: Introduction and Background

Emergence of the COVID-19

COVID-19 is a novel corona virus that emerged in China in 2019. Coronaviruses are zoonotic viruses that circulate amongst animals and spill over to humans from time to time and have been causing illness ranging from mild symptoms to severe illness. On 31 December 2019, the WHO received a notification from China of a cluster of cases of pneumonia in Wuhan, China. On 7 January 2020, Chinese authorities confirmed that the identified virus and causative agent was a coronavirus (SARS CoV-2) disease COVID-19. On 30 January 2020, the Director-General of WHO declared the COVID-19 outbreak a Public Health Emergency of International concern (PHEIC) under the International Health Regulations (IHR) (2005), following advice from the Emergency Committee.

On 4 February 2020, the Director-General of WHO briefed the Secretary-General of the United Nations and requested a UN system-wide scale up to assist countries to prepare for and respond to COVID-19. On 11 February 2020, Following WHO best practices for naming of new human infectious diseases, WHO has named the disease COVID-19, short for "coronavirus disease 2019." As of 28 February, 2020², a total of 83,652 confirmed, cases of COVID-19 Acute Respiratory Disease have been reported in 51 affected countries and number increasing. There have been 2,858 reported deaths with Case Fatality Rate (CFR) 3.4%. Few countries of South and South East Asia have reported COVID-19 with few cases reported from each of the countries.

As of 28 February 2020, four (4) countries in South East Countries (Thailand, Sri Lanka, Nepal and India) and Pakistan of South Asia have reported confirmed cases. No case has been reported from Bangladesh. On 1st February 2020, 312 Bangladesh citizens were brought back from China's Wuhan city and quarantined for 14 days. Subsequently some other persons with history of exposure were quarantined. Few dozen samples were tested in Bangladesh for COVID-19 and all were found to be negative. As of 28th February 2020, there is no reported COVID-19 case in Bangladesh. WHO assessed the risk of this public health event as very high in China, regional and global level.

The IHR Emergency Committee for the COVID-19 convened on 22 and 23 January emphasized that "it's expected that further international exportation of cases may appear in any country. Thus, all countries should be prepared for containment, including active surveillance, early detection, isolation and case management, contact tracing and prevention of onward spread of COVID-19 infection, and to share full data with WHO". Information, facts and knowledge available when the COVID-19 was first detected is rather limited.

As the situation evolves globally, crucial information such as population at increased risk, case fatality ratio, complication rate, basic reproduction number (R0) and other transmission characteristics is increasingly coming to light. With the new information becoming available, the risks are being assessed and reviewed to ensure that the appropriate corresponding measures are adopted based on the most updated scientific knowledge and the latest situation.

² Who Coronavirus disease 2019 (COVID-19) Situation Report – 39: <https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200228-sitrep-39-covid-19.pdf>

Bangladesh: Country Profile

Bangladesh is a democratic country surrounded by India from east, west and north, Myanmar from south-east with Bay of Bengal at south side. The estimated size of the population in Bangladesh is 162.7 million (on 1 July 2017). The male to female ratio is 100.2:100. The average household-size is 4.2. The life-expectancy is 71.8 years (70.6 years for males and 73.1 years for females) and population growth rate is 1.37% (2017, SVRS)³. It is estimated that about 2.4 million Bangladeshis are living abroad. Bangladesh has a unitary form of government, with no state or province. There are 64 districts in the country. Each district is again divided into several upazilas (sub districts). There are 491 upazilas in the country. The upazilas are divided into unions, and each union is divided into 9 wards. There are 4,554 unions and 40,977 wards in the country and approximately 87,310 villages. The urban areas have 12 city corporations and 327 municipalities. There are 58 ministries and functional divisions. The Ministry of Health and Family Welfare is one of the largest ministries of the Government of Bangladesh. Bangladesh is a country with the highest population-density. Around 63.4% of total population in 2018 lived in rural areas. The GDP growth rate is 7.86% (2017-2018, Bangladesh Bureau of Statistics, BBS) and GDP per-capita (current price as per 2017-2018 estimate) is US\$ 1,751 (BBS 2018). Bangladesh has had a long history of hosting displaced Rohingyas. In 1978, more than 200,000 Rohingyas first entered Bangladesh. While the Rohingyas legally fall under the category of "de jure stateless," the Government of Bangladesh (GoB) recognizes them as "Forcibly Displaced Myanmar Nationals". ³Total 914,998 population of Forcibly Displaced Myanmar Nationals (FDMNs) are living in 211,383 households in Ukhia and Teknaf Upazila of Cox's Bazar.

Bangladesh: Health System

The public sector is largely used for out-patient, in-patient and preventive care, while the private sector is used largely for outpatient and in-patient curative care. The Ministry of Health and Family Welfare (MoHFW) is responsible for planning and management of curative, preventive as well as promotive health services to the population of the country.

But in urban areas, primary healthcare services, is mandated to the Ministry of Local Government, Rural Development and Cooperatives (MoLGRD&C). Since the late 1990s, the Government of Bangladesh (GoB) and its development partners have pursued a sector-wide approach (SWAp) in the Health, Nutrition and Population (HNP) sector. The Ministry of Health and Family Welfare (MoHFW) is currently implementing the 4th Health, Population and Nutrition Sector Program (2017-2022).

The present government has taken steps to revitalize PHC services by making the community clinics operational. These community clinics, one for every 6000 rural populations, were constructed in 2000-2001, but were not used for service delivery during the previous governments.

These service points have some unique characteristics. They are managed by a Community Clinic Management Group which includes local public leaders and representatives.

¹ The World Bank 2020, <https://www.worldbank.org/en/country/bangladesh/overview>

³ Health Bulletin 2018, Management Information System, Directorate General of Health Services <https://dghs.gov.bd/images/docs/Publications/HB%202018%20final.pdf>

The policy in this regard is to place the responsibility for the health of the people in the hands of the people themselves. Functional community clinics with adequate staff, supplies and logistics along with strengthened union and upazila level services is required to be rapidly institutionalized to improve the delivery of preventive and curative services at the PHC level, particularly for vulnerable women, children and marginalized population. In the public sector, upazila health complexes, and district hospitals, are providing curative care at primary and secondary levels respectively. Tertiary- level curative care is mostly provided at national and divisional levels through large hospitals affiliated with medical teaching institutions. Most of the curative, preventive, promotive and rehabilitative services are rendered by public sector facilities and institutions.

The IHR capacities in Bangladesh have been significantly improved over the past several years, reaching 68% and exceeding both the global and regional averages and it has the national capacity to laboratory confirm COVID-19 (PCR). But as any other country, Bangladesh faces the risk of virus importation and its onwards transmission, especially considering its close integration into the regional and global economy, high international labor mobility of its population and significant network of international flights, multiple seaports and land crossing port.

Institute of Epidemiology, Disease Control and Research (IEDCR), Institute of Public Health (IPH) and Institute of Public Health Nutrition (IPHN), National Institute of Preventive and Social Medicine (NIPSOM) are the major public health institutes of public sectors. Among these institutes, IEDCR is the focal institute for conducting public health surveillance and outbreak response & IHR focal institute.

Director, Disease Control, DGHS is the national IHR focal point and there is a programme for IHR under CDC of 4th HPNSP. CDC, DGHS & IEDCR coordinated response activities during pandemic influenza (2009), Ebola preparedness (2014), chikungunya (2017), 1st,2nd and 3rd national avian and pandemic influenza preparedness and response plan.

IEDCR, BSMMU, Mymensingh Medical College Hospital, Sylhet Osmani Medical College Hospital have bio-safety level 2 (BSL2) laboratories and serology laboratories. IPH, Chattogram BITID have bio-safety level 3 (BSL3) laboratories, molecular. IEDCR identified the presence of dengue virus (2000), Nipah virus (2001), H5N1 (2008), 1st case H1N1 (2009) in the country. Army medical corps usually provide curative and preventive services in the cantonments and neighboring areas of the country.

During emergency, this medical corps merged with the national level response. Private sector facilities, now are gradually taking part in health services, mostly confined at the urban areas, which includes tertiary care hospitals and curative care. Public private partnership (PPP) plays an important role in providing preventive services in the urban areas with the help of non-government organizations (NGOs).

³ National FDMN Dashboard, DGHS 2020,
http://103.247.238.81/webportal/pages/controlroom_rohingya.php

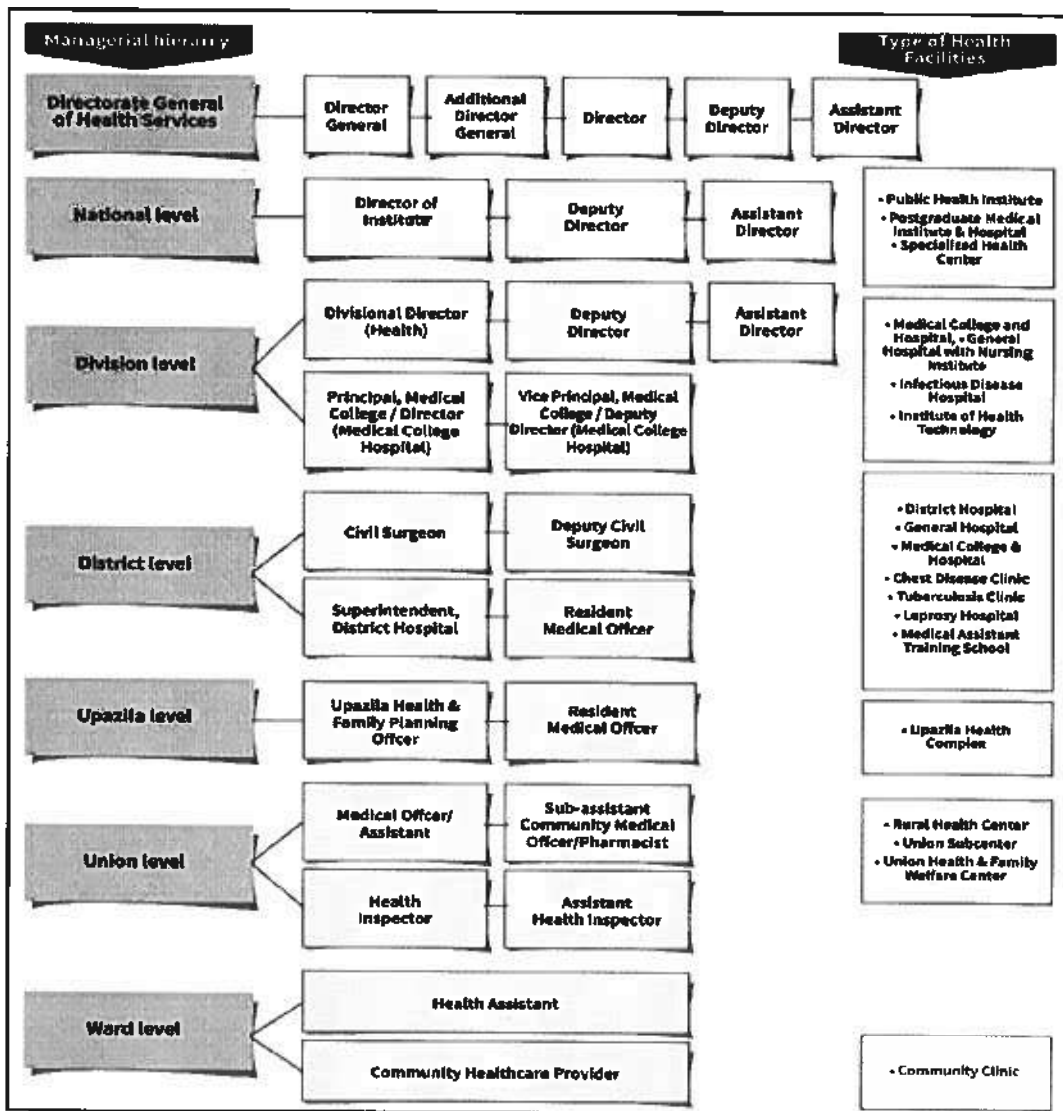


Figure 1 Managerial hierarchy according to types of facilities from national to the ward level

Health Workforce

Bangladesh has a nationwide network of medical colleges, nursing and paramedical institutes. There are 39 post-graduate medical teaching institute (7 of them autonomous & 10 private), 105 medical colleges (69 of them are private), 60 nursing colleges (45 of them are private), 183 nursing institute (140 of them are private), 209 medical assistant training schools (200 of them are private), and 108 institute of health technology (97 of them are private). In addition to the above institutes, there are 35 Dental colleges and dental units (of them 26 are private), 6 Armed forces & Army Medical Colleges. In spite of this growth to health workforce production, the country is still having health workforce shortage and geographical imbalances. Existing health workforce of Bangladesh periodically trained in responding emerging and reemerging diseases by CDC, DGHS & IEDCR. This trained workforce participates in

surveillance and outbreak response in national, district and upazila level.

Health Information System and e-Health

Management Information System (MIS) is a department of the Directorate General of Health Services (DGHS) under the Ministry of Health and Family Welfare. The main objective of MIS is to establish and run the Health Information System (HIS) and e-health in Bangladesh. A well-established DHIS-2 is on the place. DHIS2 platform could use for gathering data from different health facilities and PoE. Regular update will be show as a dash board in DGHS website. Under the “Digital Bangladesh 2021” vision launched by the country in 2009, the entire health sector, (including national, sub-national and grassroots community health workforce) is digitally connected to the robust national databases.

Surveillances and outbreak responses

The country has the capacity of sentinel-based, community-based, web based and cell phone-based surveillance. Most of the surveillance is run by IEDCR. Outbreaks of respiratory diseases of Bangladesh mostly identified by the event-based surveillance (hotline and media surveillance), national and hospital-based influenza surveillances. IEDCR is recognized as the National Influenza Centre (NIC) of Bangladesh by World Health Organization (WHO) in 2008. Outbreak responses from the national level is run by national rapid response team (NRRT) which is based at IEDCR. Public health emergencies at the district level are responded by district rapid response team (DRRT) and at the upazila level upazila rapid response team (URRT). DRRTs are headed by civil surgeon and URRTs are headed by upazila health and family planning officer (UHFPO). IEDCR also trains veterinary doctors in surveillances and outbreak investigations for improving outbreaks of zoonotic diseases through One Health approach. For advanced response, IEDCR is developing workforce trained in field epidemiology training program, Bangladesh (FETP,B) – advanced and frontline. During large disease outbreaks such as in chikungunya (2017) and dengue outbreak (2018-2019), natural disaster, flood, accidents, fire/ chemical incidents etc., the health emergencies are responded by health emergency operation center and National Crisis Management Centre and Control Room coordinates public health responses.

Medical Products and Technologies

Enhancing access of the common people to essential quality medicines has been one of the priorities of the government. With support from the government there is a big domestic pharmaceutical industry manufacturing drugs for the local consumption as well exporting to other countries. Currently, the local production meets about 97% of the overall local demand for drugs and 100% of that for the essential drugs.

Health Financing

About 3% of Bangladesh’s GDP is spent on health, out of which the government contribution is about 1.1%. In term of dollar, the total health expenditure in the country is about US\$ 12 per capita per annum, of which the public health expenditure is around US\$ 4. In Bangladesh, historically, supply-side financing of health care services has been the backbone strategy for improving the access of poor households to essential health care services. A bulk of health care financing in Bangladesh is coming from out-of-pocket that indicates people are willing to pay for better care. More than two-thirds of the total

expenditure on health is privately financed, through out-of-pocket payments. Of the remaining one-third (public financing), about 60% is financed by the Government out of tax revenues, development outlays, and the remaining 40% through international development assistance. An implication for this out-of-pocket payment for the population in the lower quintile is that they are forced to pay for health care when their ability to pay is at the lowest limit.

Communicable disease law in Bangladesh

Bangladesh updated "INFECTIOUS DISEASES (PREVENTION, CONTROL AND ELIMINATION) ACT, 2018" on communicable diseases. In 3(k) section of the ACT describe "keep or quarantine any suspected person infected with an infectious disease, at a specific hospital, temporary hospital, establishment or home". This law empowers government in notification, isolation, quarantine, sample collection and testing in emerging diseases. The law forms an advisory committee, headed by Minister, MoHFW, including Ministry of Agriculture and Ministry of Fisheries and Livestock (Appendix).

Rationale, Scope and Objectives of the Plan

It has been proven by numerous experiences that the ability to effectively respond to a 'threat' is strongly influenced by the extent to which such threats have been assessed in advance and prepared for with corresponding prevention and mitigation measures. Preparedness planning for health emergencies aims to reduce the burden associated with the health threat in terms of mortality and morbidity, hospitalizations and demand for health care goods and services; to maintain essential services, protect vulnerable groups, minimize economic and social disturbance and enable a quick return to normal conditions. On 30 January 2020, the Director-General of WHO declared the COVID-19 outbreak a public health emergency of international concern under the International Health Regulations (IHR) (2005). Building upon core elements required to address generically different types of health threats, whether anticipated or unexpected such as COVID-19, the strategy developed in this document is based on the WHO global COVID-19 preparedness plan published in February 2020 and the WHO Country Readiness Checklist. This document sets out the 'preparedness and response plan' of the Bangladesh for COVID-19 Acute Respiratory Disease ("the Plan") and outlines the planning scenarios, areas of work and priority activities required for the Bangladesh health sector to scale up its core capacities to prevent, quickly detect, characterize the response and efficiently control, in a coordinated manner to the COVID-19 threats, and as required under the International Health Regulations (IHR 2005).

Emergence of the COVID-19 Acute Respiratory Disease threat

Coronaviruses are zoonotic viruses that circulate amongst animals. Some have been identified in humans, causing illness ranging from mild cold symptoms to severe illness.

On 31 December 2019, the WHO received a notification from China of a cluster of cases of pneumonia in Wuhan, China. On 7 January 2020, Chinese authorities confirmed that the identified virus and causative agent was a coronavirus (SARS CoV-2) disease COVID-19.

On 30 January 2020, the Director-General of WHO declared the COVID-19 outbreak a public health emergency of international concern under the International Health Regulations (IHR) (2005), following advice from the Emergency Committee. On 4 February 2020, the Director-General of WHO briefed the Secretary-General of the United Nations and requested a UN system-wide scale up to assist countries to prepare for and respond to COVID-19.

COVID-19 Risk Analysis in the South-East Eastern Region and Bangladesh

WHO assessed the risk of this public health event as very high in China, high at regional and global level.

The IHR Emergency Committee for the COVID-19 convened on 22 and 23 January emphasized that "It's expected that further international exportation of cases may appear in any country. Thus, all countries should be prepared for containment, including active surveillance, early detection, isolation and case management, contact tracing and prevention of onward spread of COVID-19 infection, and to share full data with WHO"

As of 9 February 2020, two (2) countries in South East Countries (Nepal and India) already reported confirmed cases.

The IHR capacities in Bangladesh have been significantly improved over the past several years, reaching 68% (ref?) and exceeding both the global and regional averages and it has the national capacity to laboratory confirm COVID-19 (PCR). But as any other country, Bangladesh faces the risk of virus importation and its onwards transmission, especially considering its close integration into the regional and global economy, high international labor mobility of its population and significant network of international flights, multiple seaports and land crossing port.

On 1st February 2020, 312 Bangladesh citizens were brought back from China's Wuhan city and quarantined for 14 days. Eight (8) of them were immediately, three (3) more subsequently were isolated as they showed symptoms. Their samples were tested on the 2nd February 2020 in the laboratory of the Institute of Epidemiology, Disease Control and Research (IEDCR) and found negative for COVID-19. As of 20th February 2020, there is no confirmed COVID-19 case in Bangladesh.

Goal and Objectives

Goal: To prevent and control of COVID-19 in Bangladesh to reduce impact on the health, wellbeing and economy of the country

This Plan follows the overall WHO's strategic objectives for the COVID-19 response, which are to:

1. To prevent entry of COVID19 case in Bangladesh from affected countries.
2. To limit human-to-human transmission including reducing secondary infections among close contacts and health care workers,
3. To prevent transmission & amplification events, and enhance infection prevention & control in community and health care settings;
4. To identify, isolate and care for patients early.
5. To communicate critical risk and event information to the communities and counter misinformation;
6. To minimize social and economic impact through multisectoral partnerships.

Section 2: Planning and Coordination

Planning Scenarios and Response Levels

To facilitate planning and identify response levels, 6 country levels have been identified according to COVID19 infection status. Under each level, the risk assessment should be conducted to determine/maintain/change the response level. The risk assessment should take into consideration general key factors such as clinical severity of the illness such as its clinical course, comorbid illness and any serious consequences leading to deaths; transmissibility of the infection, and the capability of sustaining community-level outbreaks; geographical spread of the COVID-19 in humans or animals; availability of preventive measures; vulnerability of the population; difference in attack rates or risk of serious consequences; impact on healthcare infrastructure, risk of transmission in healthcare settings; and recommendations by international health authorities (WHO). Any other/new relevant information about the situation of COVID-19 in the country should feed into the risk assessment as it becomes available.

Analysis of strengths and weaknesses of the response should be addressed and necessary capacity

C	Country Level 1: No case is detected in the country
C₁	Country Level 2: Imported cases and limited Human-Human Transmission
C₂	Country Level 3: Cluster of cases
C₃	Country Level 4: Community Transmission

building according to the need should be prioritized. The COVID19 epidemic is an emergency situation and the impact in terms of morbidity and mortality, social and economic consequences might be huge. To meet the emergency situation and reducing the impact, there should be plans in hand for action, the committees should be formed and or activated multisectoral collaboration and coordination have to be established and maintained. The plan includes mechanism for developing surge capacity to manage the patients, to sustain essential services and to reduce social impact. As the country situation during the epidemic/pandemic of Covid-19 might vary, following country levels are being considered during planning and implementation. Presently Bangladesh is in country level 1 and at any moment may proceed to country level 2. If the situation starts to aggravate, the emphasis will be given of mitigation measures to reduce the impact in terms of morbidity, mortality and social disruption. The response strategy and actions will have to be continuously reviewed and adjusted as necessary to ensure efficient use of financial and human resources for the effective response to the outbreak, and to be reflective of any new information, R&D advances, good practices internationally and updated recommendations from WHO.

Section 3: Surveillance and Laboratory Diagnosis

The country has the capacity of sentinel-based, event-based, community-based, web based and cell phone-based surveillance. Most of the surveillance is run by IEDCR. Outbreaks of respiratory diseases of Bangladesh mostly identified by the event-based surveillance (hotline and media surveillance), national and hospital-based influenza surveillances. Outbreak responses from the national level is run by national rapid response team (NRRT) and public health emergencies at the district level and upazila level are responded by district rapid response team (DRRT) and upazila rapid response team (URRT) respectively. DRRTs are headed by civil surgeon and URRTs are headed by upazila health and family planning officer (UHFPO). 'Corona control Room (PHEOC) of DGHS has been established at IEDCR which works in coordination and collaboration with other departments of DGHS. PHEOC of IEDCR coordinates public health responses during large disease outbreaks such as in chikungunya (2017) and dengue outbreak (2018-2019). During natural disaster, flood, accidents, fire/ chemical incidents etc., the health emergencies are responded by health emergency operation center (HEOC) and control room of DGHS.

The objectives of this surveillance are:

1. Monitor trends of the disease (human-to-human transmission)
2. Rapidly detect new cases
3. Provide epidemiological information to conduct risk assessments at the national, regional and global level
4. Provide epidemiological information to guide preparedness and response measures
5. Decrease Morbidity and Mortality

Components of COVID19 surveillance ⁴

Ongoing Copvid19 surveillance includes

- A. Screening at points of entry
- B. Surveillance using National Influenza Surveillance, Bangladesh (NISB) and Hospital Based Influenza Surveillance (HBIS) platforms
- C. Event based surveillance using existing platform

A. Screening at points of entry

The detection of suspected COVID-19 Acute Respiratory Disease virus can occur at different Points of Entry (PoE). Therefore, it is important to maintain health screening of passengers arriving from countries with the registered COVID-19 cases and to ensure that the health personnel operating at the points are properly trained. They need to be kept updated on the status of the COVID-19 outbreak and be trained to recognize the symptoms of COVID-19, to ask about travel history, and understand the protocols to properly notify the COVID-19 Control room at IEDCR, DGHS.

Screening detection of suspected case(s) of COVID-19 cases will be conducted at all POEs (as decided by the National Advisory committee and National Technical Committee). Screening is currently being done for detection of suspected case(s) of COVID-19 in 28 points of entry including air, sea and land ports. It

⁴Technical advice on surveillance, laboratory, management and infection control are available on the WHO website: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance>

is being activated following receipt of information of spread from the affected countries through travelers. Detailed activities are mentioned in section 4.

Trained personnel will be assigned for the observation and follow up of the passengers in the PoE and quarantine facility. These staffs or health care workers will be equipped with the basic PPEs and commodities needed to deal with the suspected cases (medical/surgical masks, gowns, gloves, face shields or goggles, hand sanitizers and disinfectants). Active surveillance will be conducted to identify suspected COVID-19 cases among these service providers.

B. NISB and HBIS Influenza Surveillance Platforms

Respiratory tract infection samples under ILI and SARI surveillance is being continued in 18 selected hospitals sites of NISB & HBIS platform under National Influenza Center (NIC), IEDCR, MoHFW. ILI and SARI surveillance will be strengthened for providing support in suspected COVID-19 case detection, sample collection, sample storage and transportation to reference laboratory. In addition, the number of surveillance sites will be increased if necessary.

Contact Tracing after Identifying confirmed case in any surveillance method

The IEDCR will be responsible for contact tracing and contact management, including control measures; it will conduct active surveillance if required.

A contact is a person that is involved in any of the following: -

- Providing direct care without proper personal protective equipment (PPE) 2 for COVID-19 patients
- Staying in the same close environment of a COVID-19 patient (including workplace, classroom, household, gatherings).
- Traveling together in close proximity (1 m) with a COVID-19 patient in any kind of conveyance within a 14-day period after the onset of symptoms in the case under consideration.

Social and health care worker contact: Any social or health care worker, who provided direct personal or clinical care, or examination of a symptomatic or asymptomatic confirmed case of COVID-19 or within the same indoor space, when an aerosol generating procedure was implemented

Household contact: Any person who has resided in the same household (or other closed setting) as the primary COVID-19 case.

Details of contact tracing procedure is mentioned in the annex 2.

Laboratory Diagnosis ⁵

The laboratory plays a key role to detect cases and support the surveillance. Initially sample will be collected from all suspected cases, but in country level 2 & 3 sample will be collected from selected cases depending upon the situation. Lab diagnosis will be based on real time RT-PCR at IEDCR with concurrent checking in WHO reference laboratory.

The National Reference Laboratory in Bangladesh for COVID-19 is the a BSL-2 laboratory at the IEDCR in Dhaka. The laboratory diagnosis will be conducted according to SOP. Positive controls for COVID-19

⁵Laboratory testing for 2019 novel coronavirus, (2019-nCoV) in suspected human cases, Interim guidance, 17 January 2020

were provided by WHO on 2nd February 2020. Conventional PCR technique was initially used to detect Pan corona virus family and a network of the WHO reference laboratories has been identified for confirmation of the COVID-19. Now at IEDCR, there are facilities for confirm diagnosis of COVID-19 by Real time PCR techniques.

Waste generated from laboratory activities like during sample collection, transportation and sample preparation and test procedure should be handled carefully and dispose according to the WHO biosafety guideline. Biohazard bags and onsite Autoclave have to be ensured at all Microbiology and virology laboratories with BSL 2 facilities. Other laboratory selected for COVID-19 diagnosis should be strengthen with autoclave facility for waste disposal and proper training of the personal related to the activity

Section 4: Risk communication

A strong community mobilization component will be put in place which will help to create a social movement through enhanced participation and creative involvement of communities in addressing problems by using messages/materials/instructions.

A comprehensive, multi-sectoral and pro-active communication strategy will be followed. Communication will be undertaken at three levels: a) Official communication during outbreak, response and control activities; b) scientific communications among scientists and officials; c) mass communications using IEC materials, mass media, inter-personal communication, announcement, advertisements etc.

The main activities including:

- **Develop, disseminate and manage risk communications** for the general public, as well as specific intended audience, including prevention and response messaging in close coordination with MoHFW, specially with IEDCR and CDC incl PSA. Coordinate content, platforms and relationships, for mass media, community engagement, social media, website, traditional media, U-report, volunteers and other channels:
 - Risk communication to the general public during pre-onset/sporadic cases: Focus on prevention messages, including handwashing, coughing etiquette and social distancing.
 - Risk communication to the population affected or at high risk for the disease (contacts): Focus on both prevention and response messages, including information on how to recognize symptoms, where to call for advice, how to protect other people, when to seek medical assistance, and social responsibility to prevent spread.
 - Develop targeted approaches to reaching all social groups with risk communication and services, taking into account gender, age, disability, education, migration status.
 - Design and disseminate culturally and gender-relevant adaptations of key behaviours that curtail COVID-19 transmission and its social impacts (including psychosocial impacts of isolation, anxiety) as well as of discrimination.
 - Risk communication to the general public during pre-onset/sporadic cases: Focus on prevention messages, including handwashing, coughing etiquette and social distancing.
 - Risk communication to the general public at start of and during onset: Focus on both prevention and response messages, including information on how to recognize symptoms, how to protect other people, and when to seek medical assistance.
 - Counter misinformation on all relevant channels, including through social media and traditional media.
 - Balance messaging to avoid panic and create a social responsive ambience for the containment of the disease
- **Develop and standardize preventive messages package** for different audience groups as per the above, including the general public, service providers, children, parents of the children, school teachers and religious leaders.

- Conduct handwashing campaign at schools and health facilities
- Identify the key influencers and appropriate platforms for the above-mentioned messages, including health workers (Health Assistants, Family Welfare Assistants, Community Health Care Providers, nurses, doctors), religious leaders, community leaders, Union Parishad leaders, schoolteachers, local business collaboratives etc.
- Work with key influencers, 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.) to build their capacity for awareness raising and promoting healthy practices through participatory interventions. For Cox's Bazar, Imams and Maji, Camp In Charge and Camp Focal Points will be engaged.
- Orient Media and Community Radio Programme producers and reporters on developing and disseminating programmes using standardize message package in close coordination with WHO and MoHFW and NIMC.
- Provide guidelines for the government and selected NGOs to leverage their efforts by connecting their IPC efforts with mass media campaigns and on how to use standardize message package and promoting healthy practices through participatory interventions.
- Develop an automated messaging system (using mobile based platform) based on the standardized message package, to disseminate and promote accurate information and the government's COVID-19 hotline numbers for consultation and advice. Develop messaging on positive coping mechanisms, including those that can mitigate against increases in domestic violence and violence against children including messaging targeted at men, to overcome stigma and barriers to promptly accessing healthcare.
- Systematically establish community information and feedback mechanisms including through information and feedback centres, radio listeners clubs, social media monitoring; community perceptions, knowledge, attitude and practice surveys; and direct dialogues and consultations.
- Develop messaging on positive coping mechanisms, including those that can mitigate against increases in domestic violence and violence against children including messaging targeted at men, to overcome stigma and barriers to promptly accessing healthcare.

Section 4: Public health management at designated Points of Entry

Measures will be taken at point of entries to limit the entry of cases from outside. Screening for suspected cases is the important first step of these measures.

1. Screening at Points of Entry (PoEs)

The detection of suspected COVID-19 Acute Respiratory Disease virus can occur at different Points of Entry (PoE). Therefore, it is important to maintain health screening of passengers arriving from countries with the registered COVID-19 cases and to ensure that the health personnel operating at the points are properly trained. They need to be kept updated on the status of the COVID-19 outbreak and be trained to recognize the symptoms of COVID-19, to ask about travel history, and understand the protocols to properly notify the COVID-19 Control room at IEDCR, DGHS.

The DGHS has already started implementing, and will continue screening and risk communications activities at the PoEs such as:

- Introduction of Health Declaration at all points-of-entry for all passengers from all countries affected by COVID-19;
- Introduction of Passenger Locator Form at the Dhaka Hazrat Shahjalal International Airport (HSIA) for passengers arriving from countries affected by COVID-19 with expansion to all airports, land ports and sea ports receiving passengers from the affected countries;
- Making available to all passengers at all PoEs Blue Cards describing signs and symptoms of COVID-19, along with pamphlets encouraging passengers in case of symptoms suggestive of respiratory illness to seek medical attention and to share their travel history at the nearest health care facilities and IEDCR Hotline numbers;
- The DGHS will further strengthen coordination to increase awareness among travel and tourism industry personnel of the importance of infection prevention and control; to reiterate the need for airlines to adhere to compliance guidelines developed by the International Air Transport Association (IATA); and to develop PoEs contingency plans; to inform those in the tourism sector (hotels, cruise lines, travel agencies, etc.) about the outbreak evolution, the international recommendations and of the government's preparation efforts.

DGHS shares the COVID-19 screening data of PoEs to IEDCR, the focal Institute of IHR and COVID-19 Control Room.

2. Screening of passengers before arriving

Screening of passengers before arriving will be conducted as per SOP. This will be conducted to identify suspected cases of COVID19 before arriving at the points of entry. The instructions will be circulated as per contingency plan.

3. Screening of passengers after arrival at the Point of Entry

Entry screening

Temperature screening and self-declaration health form is used to identify suspected cases. Temperature screening will be implemented through thermal scanners (metallic archway or hand held

digital thermometer). Evaluation of the passengers is done with finding symptoms/signs and conduct epidemiological linking at health desk adjacent to the thermal scanner. If any suspected COVID-19 case detected, it will be communicated with the COVID-19 Control Room as per SOP.

Dissemination of health messages and travel notices to the arrival passengers through Health information card (Blue card) on signs and symptoms and where to seek medical support if needed.

Airport health authority will send all filled in health declaration forms to IEDCR at the end of the day. Data recorded in the health declaration form are compiled and analyzed at COVID-19 Control Room, IEDCR.

Measures for suspected cases detected at arrival will be followed as per SOP. Main points of management includes

- Availability of trained Personnel and supplies
- Space and guideline for for interview and initial management
- Fast track pathway and transport to rapidly refer suspected cases to the designated hospital/facility
- A functional public health emergency contingency plan at point of entry
- Disinfection of the Aircraft as per SOP

4. Non-suspected passengers' arrival into the country

If there is evidence of an imminent public health risk from the arriving passengers, the country may, in accordance with Article 31 of the IHR and in alignment with its national law, deeming the extent necessary to control such a risk, compel the traveler to undergo additional health measures that prevent or control the spread of disease, including isolation, quarantine or placing the traveler under public health observation.

- Dissemination of health messages and travel notices to the arrival passengers through Health information card (Blue card) on signs and symptoms and where to seek medical support if needed
- IEDCR conducts cell phone-based surveillance amongst these passengers.
- If passengers come from the countries where local transmission is reported, S/he will be home quarantined for 14 days.
- Risk communication: Prepare countries to communicate rapidly and transparently with the population and ensure the involvement of media to support the spread of the right messages and avoid rumors. Countries should communicate with their public early and effectively to mitigate stigma or discrimination and avoid panic, in line with the principles of Article 3 of the IHR.

Section 5. Infection Prevention and Control

Quarantine

Bangladesh will ensure emergency contingency protocols to support quarantine according to the "Infectious Disease (Prevention, Control and Elimination) act 2018" (Annexure 15). The following needs to be considered for quarantine, in accordance with Article 32 of the IHR:

- **Infrastructure:** According to WHO guideline, suitable infrastructure will be selected for quarantine.
- **Accommodation and supplies:** According to guideline provision of accommodation, food and other necessary supplies will be provided. Ministry of disaster management and relief will be engaged along with other stakeholders for this.
- **Communication:** establishment of appropriate communication channels to avoid panic and to provide appropriate health messaging so those quarantined will be done.
- **Respect and Dignity:** travelers will be treated, with respect for their dignity, human rights and fundamental freedoms and minimize any discomfort or distress associated with such measures, including by treating all travelers with courtesy and respect; taking into consideration the gender, socio-cultural, ethnic or religious concerns of travelers.
 - **Duration:** up to 14 days, may be extended due to a delayed exposure

Safe Disposal of Dead Bodies

- If a patient has died with clinical and epidemiological history compatible with COVID-19, taking an oral swab is suggested. In these situations, an autopsy is contraindicated.
- The staff for the management of dead bodies should be designated, equipped, trained and supervised by the national public health authorities to carry out the management of dead bodies under biosafety conditions.
- Personnel should use PPE at all times when handling a dead body, which includes aprons, overalls, waterproof gowns, surgical masks, eye protection (preferably with an anti-fog visor) and closed shoes.
- The care of deceased persons with suspected or confirmed COVID-19 cases require the involvement and coordination of several agencies and requires sensitivity all the time.
- The dead body must be kept whole and its handling should be limited. Regardless of the funerary practice of family or friends of the patient, the body must not be embalmed. It should be disinfected with hypochlorite solution 0.05%, placed in resistant fluid extravasation body bags, which must be properly closed before burial.

COVID-19 Priority Activities, DGHS/MOHFW, Bangladesh

Priority areas

The following seven (7) areas have been identified as the priority areas for planning and action:

1. Coordination and planning
2. Surveillance, laboratory and Points of Entry (PoEs)
3. Case finding, contact tracing and quarantine
4. Clinical case management
5. Infection prevention and control
6. Risk communication and public awareness
7. Operational Research

	Preparedness (C1, C2)	Containment (C3)	Mitigation (C4)
1. Coordination and planning	<ul style="list-style-type: none"> • Activate Control Rooms at the IEDCR and DGHS; • Establish Technical Task Force to monitor and coordinate all COVID-19 related information and activities; • Ensure direct contact and information sharing among the MOHFW, WHO, other health partners and diplomatic community in Dhaka. • Provide leadership and support to the governmental multi-sector coordination structures and efforts by formulating and 	<p>Conduct tabletop simulation exercise at the DGHS/MOHFW to assess the operability of the developed Contingency Plan;</p> <ul style="list-style-type: none"> • Active involvement of different committees • Planning social distancing and preventing mass gathering • Strict Infection Prevention Control in the hospital • Conduct tabletop simulation exercise at the DGHS/MOHFW to assess the operability of the developed Contingency Plan; • Planning for community quarantine • Activate the Incident Management System (IMS) and Health Emergency Operations Center (HEOC); 	<ul style="list-style-type: none"> • Honorable Prime Minister leads National Advisory Committee • Involvement of Armed Forces • Continue support to the governmental multi-sector coordination structures and efforts at the national, district and upazila levels; • Ensure that all institutions at different levels of the health care system and all health care workers (clinical, public health professionals, laboratory staff, etc.) are kept informed about the evolution of the COVID-19 outbreak in the country, strategies and protocols that Bangladesh has developed, is developing, or is revising in response to changing requirements; • Deploy surge HR as and where required;

	<ul style="list-style-type: none"> • activating different national and regional committees. • Identify national HR gaps, develop plans to reposition the existing staff and to create specialized national HR rosters for surge capacity; • Develop and disseminate regular Outbreak Updates; • Ensure active information sharing and engagement with all health partners and diplomatic community in Dhaka; gain necessary support based on the comparative advantages of the UN agencies and partners; • Planning for makeshift hospital and selection including stock piling resources 	<ul style="list-style-type: none"> • Develop and disseminate regular Outbreak Updates; • Mobilize and map financial and other resource for COVID-19. 	<ul style="list-style-type: none"> • Develop and disseminate regular Outbreak Updates; • Establish and regularly update 4Ws - which partner is doing what, where, when; • Continue to mobilize and map financial and other resources including PPE for COVID-19. • Activation of makeshift hospitals • Recruitment of volunteers if necessary
2. Surveillance, Laboratory and PoEs 2.1 Surveillance	<ul style="list-style-type: none"> • Develop and disseminate COVID-19 case definition; • Develop SOP, guideline and provide trainings on case definitions to health professionals to enable timely detection of signs and symptoms of the disease • Ensure alert system is in place at PoEs, health care facilities (especially major hospitals); 	<ul style="list-style-type: none"> • Enhance case detection of both local and imported cases in place through the Event Based Surveillance (EBS); • Enhance suspected case detection at PoE (through screening, self-declaration and self-reporting), in health care facilities (HCF) and in the communities; • Establish data management and strengthen analytical capacity to inform the decision making; 	<ul style="list-style-type: none"> • Shift from a sensitive surveillance strategy to syndromic surveillance • Conduct limited facility-based surveillance according to case definitions • Back the ongoing surveillance by quality laboratory diagnostic capacity

	<ul style="list-style-type: none"> • Establish rapid reporting mechanisms including, but not restricted to, a telephone hotline, texting, emails, etc • Screening at PoEs 	<ul style="list-style-type: none"> • Promote active case finding in health facilities through SARI/LI in PIP and NICs sentinel sites; • Monitor of EBS against established key performance indicators (e.g. (1) Number of alerts per week and by location; (2) Number of suspect cases by week and % of these tested for SARS-CoV-2 by RT PCR); 	<ul style="list-style-type: none"> • Implement strategies to systematically test specimens according to the national guidelines (NBI consider not testing all specimens, as this may lead to unnecessary consumption of resources); • Monitor proper implementation of laboratory biosafety and quality assurance protocols; • Ensure timely replenishment of all laboratory stocks of reagents and consumables to avoid exhaustion; • Activate the plans to expand laboratory testing and transportation of clinical specimens to manage the increased demand for testing as necessary; • Provide biosafety, biosecurity and other trainings to the expanded laboratories; • Ensure biosafety and biosecurity • Maintain the supply chain
<p>2.2 Laboratory</p>	<ul style="list-style-type: none"> • Identify laboratories that can perform molecular diagnosis using real-time reverse transcription polymerase chain reaction (RT-PCR) with demonstrated quality and biosafety; • Develop, review and approve SOPs for the molecular detection of COVID-19 by adapting available assays to their respective laboratory context; • Ensure access to the latest WHO laboratory guidance; • Conduct biosafety and biosecurity trainings; • Training of staff involving in specimen collection and transport, for safe specimen collection and safe transport • Ensure availability of necessary equipment, kits, reagents and consumables including PPE 	<ul style="list-style-type: none"> • Expanding laboratory network and testing capacity • Monitor proper implementation of laboratory biosafety protocols; • Timely replenish laboratory stocks of reagents and consumables to avoid exhaustion; • Introduce online reporting of the COVID-19 laboratory results to the national authorities and WHO Country Office; • Establish system to collect, manage and back up laboratory data; • Develop plans to expand laboratory testing and transportation of clinical specimens to manage the increased demand for testing; identify the needs for additional lab facilities, trained staff, equipment, including PPEs, reagents and disinfectants to operate during such surge; • Implement quality assurance protocols for COVID-19 laboratory diagnosis in accordance with the WHO 	

	<ul style="list-style-type: none"> • Testing in designated laboratories • Establish specimen collection and transportation pathways from health facilities/quarantine facilities/specimen collection points to the testing laboratories; • Develop quality assurance protocols for COVID-19 laboratory diagnosis in accordance with the WHO 	<ul style="list-style-type: none"> • Ensure biosafety and biosecurity • Maintain the supply chain 	
<p>2.3 Point of Entry (PoEs)</p>	<ul style="list-style-type: none"> • Implement temperature screening for all arriving international passengers; • Introduce mandatory health self-declaration for all arriving international passengers; • Establish and maintain electronic database for passengers' health declarations 	<ul style="list-style-type: none"> • Activation of Crisis management team at designated PoE. Activation of Health Emergency Operation Center. • Coordinate with the aviation authorities, immigration, MoFA and other relevant authorities for the retrieval of flight manifests as needed, implementation of current Gov't regulations on entry to the country and visa-upon-arrival, etc; • Conduct health screening of all arriving international passengers; • Establish and maintain electronic database for passengers' health declarations • Facilitate identification of exact location of contacts of confirmed cases both inside and outside the country; through immigration for those who are in the country, through the airline manifest to determine contact's final destination and 	<ul style="list-style-type: none"> • Adapt passenger health screening procedures depending on the prevailing air traffic regulations and epidemiological situation.

	to inform the relevant authorities in other countries accordingly.		
3. Contact tracing and Quarantine			
3.1 Case finding	<ul style="list-style-type: none"> • Provide trainings to Rapid Response Teams (RRT) at national and subnational levels on sample collection of respiratory pathogens; • Equip all RRTs with PPEs; • Disseminate the WHO definition of "contacts" • Develop protocols and Standard Operating Procedures (SOP) for contact tracing; • Conduct contact tracing as per SOP 	<ul style="list-style-type: none"> • Set up and train multiple contact tracing teams, comprised of thoroughly trained and socially skilled healthcare workers, with experienced leadership and with clearly defined roles and responsibilities within teams; • Ensure availability of PPEs and transportation for contract tracing and RRTs; • Establish and implement electronic data management using Go-Data software; • Ensure that personnel involved in the direct care of a patient under investigation or of a confirmed case, as well as laboratory personnel are registered and monitored as contacts; • Ensure availability of proper transportation for the transfer of contacts, who developed symptoms compatible with COVID-19, to designated isolation facility for further medical assessment and investigation; • Monitor the contact tracing through the established key performance indicators. • Ensure timely and proper reporting of the COVID-19 cases to the WHO HQ and CO through the IHR national focal point. • Ensure timely and proper data entry for the confirmed COVID-19 case(s) in the WHO global database 	<ul style="list-style-type: none"> • Periodically review SOPs for contact tracing and activate, if relevant, contingency plans to tackle large number of contacts and contacts scattered across country; • Ensure timely and proper reporting of the COVID-19 cases to the WHO HQ and CO through the IHR national focal point; • Ensure timely and proper data entry for the confirmed COVID-19 cases in the WHO global database.

<p>3.2 Quarantine</p>	<ul style="list-style-type: none"> • Prepare the isolation wards at the designated health facilities Kurmitola General Hospital, Infectious Disease Hospital (IDH) and Kuwait Bangladesh friendship government hospital for isolation and treatment of suspected COVID-19 cases); • Prepare isolation units in all governmental hospitals; • Ensure all private hospitals and clinics are instructed to prepare isolation units at their respective premises; • Develop and follow biosafety protocols for case management and care of the quarantined patients at health facilities; • Develop guidelines for self-quarantine at home for suspected, mild and moderate cases; • Develop guidelines and education materials for household members of the self-quarantined cases; 	<ul style="list-style-type: none"> • Plan and implement containment • Consider and plan for establishing alternate health facilities. 	<ul style="list-style-type: none"> • If and as necessary, prepare alternate facilities that comply with relevant IPC and WASH requirements and where all appropriate protocols can be followed for isolation of growing number of suspected and confirmed cases;
<p>4. Clinical management</p>	<ul style="list-style-type: none"> • Designate and prepare public, private and alternate facilities to provide care and treatment for the case management; 	<ul style="list-style-type: none"> • Disseminate case definition, national guidelines and SOPs on clinical management to the designated treatment facilities, and provide appropriate orientations to health professionals; 	<ul style="list-style-type: none"> • Update case definitions • Continue support to the designated public, private and alternate facilities to ensure adequate capacities and supplies are available to provide care and clinical management of cases and ensure infection control;

<ul style="list-style-type: none"> • Establish Intensive Care capacity at the divisional and district levels; • Train Intensive Care Unit (ICU) staff; • Develop national guidelines and SoP for managing patients with COVID-19 symptoms at health facilities, self-care, referral. • Establish referral mechanisms for severe cases with co-morbidities to specialized referral hospitals; • Enhance Information management system (IMS) on clinical management; • Set up screening areas for respiratory diseases at all healthcare facilities, to ensure safe delivery of primary healthcare services; • Establish ambulatory service for management of severe acute respiratory infections; • Maintain triage and screening areas at all healthcare facilities for respiratory diseases; 	<ul style="list-style-type: none"> • Provide support to the designated public, private and alternate facilities to ensure adequate capacities and supplies are available to provide care and clinical management of cases and ensure infection control; • Activate and maintain referral mechanisms for severe COVID-19 cases with co-morbidity to specialized hospitals for management; • Continue maintaining triage and screening areas at all healthcare facilities for respiratory diseases; • Equip and train medical teams at the primary healthcare level and ambulances to handle and transport suspected and confirmed cases; • Make efforts to provide comprehensive medical, psycho-social and other auxiliary care for COVID-19 patients; • Share international knowledge and experience on COVID 19 clinical care with the national health providers; • Collect clinical data and analysis for using for evidence-based treatment and sharing with WHO clinical data platform 	<ul style="list-style-type: none"> • Ensure adequate supplies and HR available at all designated Intensive Care Units (ICUs); • Strengthen knowledge and capacity for home care for mild patients among patients and health professionals; • Prepare for and build capacity for overwhelming patient load at primary, secondary and tertiary care levels; • Ensure sufficient stocks of vital supplies are available, stocks are properly maintained, monitored and accounted for; supply chain is functional for continuous supply in case of increased needs for vital supplies; • Make efforts to ensure a widespread comprehensive medical, psycho-social and other auxiliary care for COVID-19 patients; • Disseminate the updated information on the clinical management and continue orientation and trainings to health professionals on COVID-19 clinical management and SOPs at all levels of the hospital and community care; • Ensure active referral mechanisms for severe cases from home care and lower level hospitals to higher level hospitals; • Evaluate implementation and effectiveness of case management procedures and protocols (including for pregnant women, children, immunocompromised) • Collect and analyze clinical data for evidence-based treatment decisions and share through the WHO clinical data platform; • Participate in clinical expert network to aid in the clinical characterization of COVID 19
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		infection in the country and to support other countries in addressing challenges in clinical care;
5. Infection Prevention and Control (IPC)		
<ul style="list-style-type: none"> Ensure IPC programme is in place and is an integral part of the overall COVID-19 containment, prevention and control strategy; Revise and update the national IPC guidelines and SOPs as necessary; Develop national training modules, identify trained trainers and conduct ToTs; Develop protocols for tracking healthcare personnel exposed to confirmed cases of COVID 19 and monitoring them for symptoms compatible with COVID-19; Develop strategy for efficient management of the PPE supply stockpile, distribution and replenishment. Identify IPC HR surge capacity needs (numbers and competences). Promote triage, infectious-source controls, administrative controls and engineering controls at all designated health facilities; 	<ul style="list-style-type: none"> Assess IPC capacity at the designated isolation and treatment health facilities for suspected and confirmed cases with regard to: <ol style="list-style-type: none"> functional triage system isolation rooms trained staff (for early detection) sufficient IPC materials WASH services /hand washing facilities IPC focal point/s and IPC committee SOPS on precautions Engage trained staff with the authority and technical expertise to implement IPC activities at the health facilities; Monitor healthcare personnel exposed to confirmed cases of COVID 19 and apply appropriate measures immediately; Monitor, record, report and investigate all cases of healthcare-associated infections; suspected and confirmed cases; Monitor IPC and WASH implementation against established indicators in the designated isolation and treatment healthcare facilities; Carry out trainings to address any identified skills and performance deficits; Assess IPC capacity in public places and community spaces where risk of community transmission is considered high; 	<ul style="list-style-type: none"> Provide prioritized tailored support (including supplies, HR, trainings) to health facilities based on the IPC risk assessments and local care-seeking patterns; Continue IPC trainings to key health staff at health care facilities across the country; Efficiently manage PPE stock distribution and replenishment requests; Continue monitoring healthcare personnel exposed to confirmed cases of COVID 19; Monitor, record, report and investigate all cases of healthcare-associated infections; Disseminate IPC guidance for home and community care providers; Continue active engagement of trained staff with authority and technical expertise to implement IPC activities in public places such as schools, markets, public transport as well as community, households, and family practices. Develop and disseminate easy to understand educational materials and messages in local language(s) for family members of isolated and self-isolated patients; Monitor people in the community exposed to confirmed cases of COVID 19 for respiratory symptoms; Support access to water and sanitation for health (WASH) services in public places and community spaces most at risk;

	<ul style="list-style-type: none"> Develop and disseminate easy to understand IPC educational materials and messages in local language(s) for family members of COVID-19 Disseminate IPC guidance to all health care providers; 	<ul style="list-style-type: none"> Develop the IPC guidelines for public places such as schools, markets, public transport as well as community, households, and family practices; 	<ul style="list-style-type: none"> Continue assessing the IPC capacity and implemented IPC activities in public places and community spaces where risk of community transmission is considered high; Carry out regular monitoring IPC at hospital and community care settings;
6. Risk Communication			
	<ul style="list-style-type: none"> Develop risk communication and community engagement plan and relevant SOPs; Identify HR needs, train and prepare Risk Communication experts for surge capacity; Identify official MOHFW spokesperson(s) with adequate communications skills and training, and sound public health expertise; Sensitize media on COVID-19 and related issues; Train healthcare workers and sensitize volunteers on COVID-19; Provide guidance to public and private hospitals and general physicians on COVID-19 and ways to communicate about it/inform suspected and confirmed patients; Conduct a Knowledge, Attitude and Practice survey to 	<ul style="list-style-type: none"> Disseminate appropriate messages through media, social media and other means such as posters, radio and TV spots for awareness. Monitor rumors and misinformation regularly and respond immediately to fake news through multiple channels, particularly through social media; Conduct regular public perception surveys to monitor public awareness of the protective measures, as well as level of anxiety; Inform the media regularly through briefings, press releases and also through social media; Sensitize civil society organizations, religious and community leaders, adolescent clubs on protective measures and also the importance of communities following evidence-based advice to contain the threat; Activate risk communication working group with partners to ensure all communication from different partners are coordinated and 	<ul style="list-style-type: none"> Develop and announce reports regularly through daily media briefings and social media announcements, including statements by senior government figures to prevent panic and reassure the public; Disseminate and sensitize different groups (businesses, schools, etc.) regularly on protective actions needed; Monitor and proactively address rumors and misinformation; Proactively communicate through all channels on protective measures as well as what to do and where to get help if one is affected; Monitor and respond to public perceptions and attitudes and tailor messages accordingly; Activate influencers among the public; Communicate regularly with civil society and community leaders; Coordinate communication activities among health partners for maximum reach;

	<p>understand public perception and develop messages accordingly;</p> <ul style="list-style-type: none"> • Develop messages for the general public, health workers and those at Points of Entry and disseminate through appropriate channels, including social media and healthcare volunteers; • Disseminate messages through media, social media and other means such as posters, radio and TV spots for awareness. • Monitor public perceptions through hotlines, media and social media; • Detect and guard against the spread of rumors, myths and panic; 	<p>all speak with "one voice" to build trust and prevent panic;</p> <ul style="list-style-type: none"> • Find out the perceptions and awareness levels of different community groups (such as businesses, schools, elderly, etc.) through short surveys and other means and prepare communication tailored to each group to take action. 	
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Budget for priority activities to combat COVID-19 pandemic in the country

Coordination and planning		Containment	Mitigation		
1.	<ul style="list-style-type: none"> • Support multi-sector coordination 	150,000	200,000		
	<ul style="list-style-type: none"> • Conduct Table Top Simulation exercise to assess the operability of the developed Contingency Plans as relevant 	50,000	10,000		
	<ul style="list-style-type: none"> • Develop Surge HR plan and plan for repurpose staff (\$8000 x 4 person) 	96,000	96,000		
	<ul style="list-style-type: none"> • Operational cost for Health Emergency Operations Center (HEOC) including IT support 	500,000	20,000		
	<ul style="list-style-type: none"> • Activate Business Continuity Plan (BCP), Incident Management System (IMS) and Health Emergency Operations Center (HEOC) and Request for key Human Resource surge 	300,000	300,000		
	<ul style="list-style-type: none"> • Develop and disseminate Regular SitReps (Consultant) 	5,000	5,000		
	<ul style="list-style-type: none"> • Carry out exercise to identify which partner is doing what, where e.g. 4Ws 	5,000	5,000		
	Subtotal:	1,106,000	636,000		
2.	Surveillance, laboratory and Points of Entry (PoEs)				
	2.1 Surveillance	<ul style="list-style-type: none"> • Enhance case detection of both local and imported cases in place through Event Based Surveillance (EBS) 	500,000	200,000	
		<ul style="list-style-type: none"> • Suspected cases detected at PoE (screening self-declaration and self-reporting), in health care facilities (HCF) as well as community (10 @ SSA 7) 	50,000	50,000	
		<ul style="list-style-type: none"> • Alert system in place at PoEs, HCF (especially major hospitals) and communities (10 @ SSA 4) 	30,000	20,000	
		<ul style="list-style-type: none"> • Data management and analytical capacity in to inform decision making (1 @ SSA-6 and 4 @ SSA-4) 	13,000	13,000	
		<ul style="list-style-type: none"> • IT Equipment (Computer & Phone) 	100,000	20,000	
		<ul style="list-style-type: none"> • Training on case definitions to be able to detect signs and symptoms of disease as per case definition 30 persons x 64 districts 	100,000	50,000	
		<ul style="list-style-type: none"> • Active case finding in health facilities or suspect cases such as SARI/ILI in PIP and NICs sentinel sites Monitoring of EBS via the development of key performance 	15,000	15,000	
		<ul style="list-style-type: none"> • Conduct biosafety and biosecurity training and monitor laboratory biosafety protocols 	5,000	4,000	
		<ul style="list-style-type: none"> • Develop, review and authorize SOPs for the molecular detection of COVID-19 	6,000	6,000	
		2.2 Laboratory			

	<ul style="list-style-type: none"> • Training of staff involving in specimen collection and transport, for safe specimen collection and safe transport (150 Lab Tech. in 5 batches) 	10,000	5,000
	<ul style="list-style-type: none"> • Reagents and consumables (VTM, Swabs, triple packing systems, PPE etc.) 	450,000	100,000
	<ul style="list-style-type: none"> • Specimens transport from health facilities/quarantine facilities/specimen collection points to testing laboratories; 	101,000	10,000
	<ul style="list-style-type: none"> • External quality assessment of the laboratory tests 	10,000	10,000
	<ul style="list-style-type: none"> • Online reporting of laboratory results to national authorities and WHO 	25,000	5,000
	<ul style="list-style-type: none"> • PCR Machine and maintenance 	230,000	20,000
	<ul style="list-style-type: none"> • RNA Extractor and maintenance 	12,000	2,000
	<ul style="list-style-type: none"> • Viral Sequencing Machine 	250,000	20,000
2.3 PoE	<ul style="list-style-type: none"> • Hand held Thermometers for temperature screening of all arriving international passengers; 	10,000	2,000
	<ul style="list-style-type: none"> • Production of health self-declaration for all arriving international passengers; 	5,000	5,000
	<ul style="list-style-type: none"> • Data management for maintain electronic database for passengers' (1 @ SSA-6 and 6 @ SSA-4) 	16,000	16,000
	Subtotal:	1,938,000	573,000
3.	Contact tracing and Quarantine	Containment	Mitigation
3.1 Contact tracing	<ul style="list-style-type: none"> • Provide trainings to Rapid Response Teams (RRT) at national and subnational levels on sample collection of respiratory pathogens 	20,000	10,000
	<ul style="list-style-type: none"> • PPE (Mask, Gloves) Disinfectant (20,000 sets) 	10,000	5,000
	<ul style="list-style-type: none"> • HR - Contact tracing (6 SSA-5) and Training 	20,000	15,000
	<ul style="list-style-type: none"> • Transport for Case investigation and Contact tracing (6 vehicles) 	50,000	10,000
	<ul style="list-style-type: none"> • Establish and implement electronic data management using Go-Data software 	30,000	10,000
3.2 Quarantine	<ul style="list-style-type: none"> • Quarantine or Isolation Site Cost 	449,000	10,000
	<ul style="list-style-type: none"> • Management of Quarantine facility at district level (1000 cases) 	165,000	50,000
	<ul style="list-style-type: none"> • Develop and update guidelines on Quarantine mechanisms at different levels 	10,000	5,000
	Subtotal:	754,000	115,000
4.	Clinical case management	Containment	Mitigation
	<ul style="list-style-type: none"> • Develop and Update of Guidelines (Case Management & Referral) 	10,000	5,000
	<ul style="list-style-type: none"> • Oxygen Cylinder and re-filling 	350,000	135,000

Areas	Activities		
	<ul style="list-style-type: none"> Lifesaving drugs/Vital supplies for increased needs 	300,000	600,000
	<ul style="list-style-type: none"> Increase ICU Capacity 	1,000,000	300,000
	<ul style="list-style-type: none"> PPE (Full) for Doctor's & SSN including Disinfectants 	5,000,000	8,000,000
	<ul style="list-style-type: none"> PPE (Mask & Disinfectants) 	100,000	400,000
	<ul style="list-style-type: none"> Printing of Case Management Guideline (5000) 	6,000	5,000
	<ul style="list-style-type: none"> Train Intensive Care Unit (ICU) staff 	10,000	5,000
	<ul style="list-style-type: none"> Collect clinical data and analysis for using for evidence-based treatment and sharing with WHO clinical data platform [2@ SSA 7, 20 @ SSA-5] 	100,000	100,000
	<ul style="list-style-type: none"> Makeshift hospitals for overwhelming patient load at primary, secondary and tertiary care levels 	1,000,000	2,000,000
	Subtotal:	7,876,000	11,550,000
5.	Infection Prevention and Control (IPC)	Containment	Mitigation
	<ul style="list-style-type: none"> Develop SOPs, guidelines, national training modules, ToTs 	40,000	2,000
	<ul style="list-style-type: none"> Printing of IPC Guideline (5000) 	10,000	5,000
	<ul style="list-style-type: none"> Training for Caregivers - (ToT, SoPs, PPE, Triage, Isolation, WASH, IPC) 	40,000	5,000
	<ul style="list-style-type: none"> PPE (Full), Sanitizer, Disinfectants (Cleaning) 	900,000	1,000,000
	<ul style="list-style-type: none"> HR surge capacity for IPC (200 @ SSA 1) 	500,000	500,000
	Subtotal:	1,490,000	1,512,000
6.	Risk communication and public awareness	Containment	Mitigation
	<ul style="list-style-type: none"> Develop and Update and Printing of IEC 	250,000	250,000
	<ul style="list-style-type: none"> Public health awareness Campaign on risk communication 	1,000,000	500,000
	Subtotal:	1,250,000	750,000
	Total by Phase	14,414,000	15,136,000
	Grand Total		

Annex 1: Case Definition of COVID-19⁶

i. Suspect Case

A A patient with acute respiratory illness (fever and at least one sign/symptom of respiratory disease (e.g., cough, shortness of breath), AND with no other etiology that fully explains the clinical presentation AND a history of travel to or residence in a country/area or territory reporting local transmission (See situation report) of COVID-19 disease during the 14 days prior to symptom onset.

OR

B A patient with any acute respiratory illness AND having been in contact with a confirmed or probable COVID-19 case (see definition of contact) in the last 14 days prior to onset of symptoms;

OR

C. A patient with severe acute respiratory infection (fever and at least one sign/symptom of respiratory disease (e.g., cough, shortness breath) AND requiring hospitalization AND with no other etiology that fully explains the clinical presentation.

ii. Probable Case

A suspect case for whom testing for COVID-19 is inconclusive.

- Inconclusive being the result of the test reported by the laboratory

iii. Confirmed Case

A person with laboratory confirmation of COVID-19 infection, irrespective of clinical signs and symptoms.

- Information regarding laboratory guidance can be found here.²

¹⁴<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>

⁶ Global surveillance for COVID-19 disease caused by human infection with the 2019 novel coronavirus, Interim guidance 27 February 2020:

Annex 2: Contact Tracing procedure

- As part of contact tracing, the following information for each contact is to be collected: name, address, relationship with the patient, date of last contact and type of contact. In addition, countries should have the tools for efficient information management.
- Both health personnel involved in the direct care of a patient under investigation or of a confirmed case of COVID-19, as well as laboratory personnel, must be registered as a contact and monitored until 14 days after the last chance of exposure to contaminated material have passed.
- Any contact with clinical symptoms within 14 days of the last exposure/contact with the primary case should be considered as a symptomatic contact and so a suspected case, and therefore managed as such.
- Contacts, who developed symptoms compatible with COVID-19 within 14 days of last exposure, must be referred to the isolation ward in nearby designated hospitals for medical assessment and further investigation. The information also will be shared with COVID-19 control room at IEDCR.
- When an individual with clinical and epidemiology history compatible with COVID-19 is identified or if there are unexplained deaths of travelers, with clinical and epidemiological history compatible with COVID-19, (even if/when laboratory diagnosis is pending), identification of contacts and monitoring for 14 days (after the last known exposure to COVID-19) should be initiated.
- If the patient with illness compatible to COVID-19 develops symptoms while on an airplane, contact tracing must be made according to the Risk assessment guidelines for diseases transmitted on aircraft (RAGIDA), which indicates contact tracing of all those passengers seated in an adjacent two rows to the patient in all directions -on the side, in front or behind, including across an aisle-, as well as the crew on board.
- The daily monitoring of contacts may be made through in-person visits or phone calls. The contact should be instructed to go to a health care facility if symptoms are present. For household visits of asymptomatic contacts, the use of PPE by healthcare personnel performing the visit is not required.
- The asymptomatic individuals identified as contacts do not require use of PPE as long as they remain asymptomatic and may continue their daily routines and must remain available and notify the health personnel of any change of location that may affect the health personnel's ability to carry out daily monitoring. For operational reasons, the non-essential travel of contacts during the monitoring period is discouraged.
- When any international traveler in transit is among the identified contacts, the national authorities should determine whether or not the traveler should stay in the country for follow-up – based on the legal framework existing in the country – or if the contact may continue to travel. If the latter is decided, the country's authorities must inform the recipient country of the arrival of these travelers that will have to be monitored.

Annex 3: NATIONAL COMMITTEE FOR PREVENTION AND CONTROL OF COVID-19

1. Chairperson: Minister, Ministry of Health and Family Welfare
2. **Members (Not according to warrant of precedence):**
 - a. Cabinet Secretary, Cabinet Ministry
 - b. Principal Secretary/Representative, Prime Minister's Office
 - c. Senior Secretary, Public Security Division, Ministry of Home Affairs,
 - d. Senior Secretary, Local Government Division, Ministry of Local Government, Rural Development and Cooperative
 - e. Senior Secretary, Ministry of Disaster Management and Relief
 - f. Senior Secretary, Ministry of Civil Aviation and Tourism
 - g. Secretary, Finance Division, Ministry of Finance
 - h. Secretary, Ministry of Public Affairs
 - i. Secretary, Ministry of Environment, Forest and Climate Change
 - j. Secretary, Ministry of Fisheries and Livestock
 - k. Secretary, Ministry of Defense
 - l. Secretary, Ministry of Foreign Affairs
 - m. Secretary, Security Services Division, Ministry of Home Affairs,
 - n. Secretary, Medical Education and Family Planning division, MOHFW
 - o. Secretary, Ministry of Information
 - p. Secretary, Ministry of Social Welfare
 - q. Secretary, Ministry of Religious Affairs
 - r. PSO, Armed Forces Division
 - s. Director General of Health Services
 - t. Director, IEDCR, DGHS
 - u. Director, Disease Control Division, DGHS
 - v. President/General Secretary, Bangladesh Medical Association
 - w. President/General Secretary, SWACHIP
 - x. President, Bangladesh Private Clinic and Hospitals
 - y. President, Bangladesh Private Medical Practitioners Association
 - z. WHO representative to Bangladesh
 - aa. Country Director/Representative World Bank Resident Mission for Bangladesh
 - bb. Country Director/Representative Bangladesh Resident Mission, ADB
 - cc. UNICEF representative to Bangladesh
 - dd. Mission Director/Director (OPHNE), USAID Bangladesh
3. Member Secretary: Secretary HSD, Ministry of Health and Family Welfare

Terms of reference (TOR)

1. Endorsement of the National Plan for prevention of COVID-19 inside the country
2. Logistics or financial support to prevent COVID-19
3. Providing directions to local committees
4. Providing direction in any other related matter
5. Committee can co-opt any member if necessary

Annex 4: NATIONAL COORDINATION COMMITTEE FOR PREVENTION AND CONTROL OF COVID-19

Members (Not according to warrant of precedence):

Adviser: Prof. Dr. ABM Abdullah, Medicine specialist and Chief Physician of honorable Prime Minister

1. Director General of Health Services (Chairperson)
2. Additional Secretary (WHO, PH), HSD, MOHFW
3. Additional Director General, Planning and Development, DGHS
4. Director Disease Control and Line Director, Communicable Disease Control, DGHS (Member Secretary)
5. Director (Administration), DGHS
6. Director (Hospital), DGHS
7. Line Director, CBHC, DGHS
8. Line Director, HSM, DGHS
9. Line Director, NCDC
10. Director, Planning and Research, DGHS
11. Director, IEDCR
12. Director, NIDCH
13. Chief, Health Education Bureau, DGHS
14. Deputy Secretary (WHO, PH), HSD, MOHFW
15. Representative of BMA
16. Representative of Medicine Society
17. Representative of Public Health Association
18. Representative of Medical Virology
19. Representative, Armed Forces Division
20. Representative, DGMS
21. Representative, WHO/US CDC/Other development partners
22. Representative, DGDA
23. Representative, CMSD
24. Consultant, IHR, CDC, DGHS
25. AD control room, DGHS
26. Assistant Director (Coordination), DGHS

Terms of Reference:

1. Review and decision on evolving issues of COVID-19
2. The committee will be functioning 24/7 through selected members of the committee and when necessary through full committee.
3. Sending documents to national technical committee or multisectoral taskforce or technical advisory group as and when necessary for approval or further action
4. May instruct coordination committees of different level as and when necessary

(The committee may co-opt members)

Annex 5: NATIONAL TECHNICAL COMMITTEE FOR PREVENTION AND CONTROL OF COVID-19

Members (Not according to warrant of precedence):

1. Director General of Health Services (Chairperson)
2. Additional Director General, Planning and Development, DGHS (Vice Chairperson)
3. Director and LD, Communicable Disease Control, DGHS
4. CVO/ Director (Animal Health and Administration), (Focal Person, Avian Influenza), DLS
5. Director (Hospital), DGHS
6. Director, Planning and Research, DGHS
7. Director, IEDCR
8. Director, IPH
9. Director, NIPSOM
10. Chairman, Department of Public Health, BSMMU
11. Representative, DGMS, Ministry of Defense
12. Representative of Medicine Society
13. Representative of Bangladesh Pediatrician Association
14. Chairman, Dept of Virology, BSMMU
15. Representative of Bangladesh Institute of Tropical & Infectious Diseases (BITID), Chittagong
16. Chief Scientific Officer, Virology, IEDCR
17. Chief Scientific Officer, Epidemiology, IEDCR
18. Representative, WHO
19. Representative, UNICEF
20. Representative, ICDDR,b
21. Specialist from Bangladesh Medical Association (BMA)
22. Program Manager, IHR, Communicable Disease Control, DGHS
23. Deputy Program Manager, IHR, CDC, DGHS (Member Secretary)
24. Consultant, IHR, CDC, DGHS

Terms of Reference:

1. Review National Plan
2. Implementation of the National Plan
3. Review communication materials.
4. Review and recommend for resource mobilization.
5. Review, adopt and implement proposals at the Directorate level;
6. Coordinate with other Directorates involved in the Plan;
7. Monitor and evaluate the activities of the plan
8. Develop, review and adoption of SOPs
9. Coordinate activities of relevant stakeholders.
10. Meet monthly and when the country situation requires
11. Co-opt member (s) if necessary

Annex 6: COMMITTEE IN DIVISION LEVEL FOR PREVENTION AND CONTROL OF COVID-19

Chairperson: Divisional Commissioner

Members (Not according to warrant of precedence):

1. Deputy Superintendent of Police
2. Director, Local Government Division
3. District Commissioner (divisional district)
4. Director, Secondary and Higher Secondary Education
5. Divisional Deputy Director, Primary Education
6. Deputy Director, Directorate of Information and Communication
7. Director, Divisional social welfare office
8. Additional Director, Agriculture extension Directorate
9. Divisional Deputy Director, Department of Livestock
10. Divisional Director, Family Planning

Member Secretary: *Divisional Director, Health*

Terms of Reference:

1. This committee will implement orders from national committee
2. Logistic and financial support to raise awareness in mass population and quarantine when necessary
3. If any information regarding COVID-19 is obtained, this committee will take necessary action in coordination with national committee
4. Taking necessary actions regarding any other issues

Annex 7: COMMITTEE IN DISTRICT LEVEL FOR PREVENTION AND CONTROL OF COVID-19

Chairperson: District Commissioner

Members (Not according to warrant of precedence):

1. Superintendent, Police
2. Director/Superintendent, Medical College Hospital/District Hospital
3. Chairman, Sadar Upazila Parishad
4. Mayor, Sadar Municipality
5. District Livestock Officer
6. District Education Officer
7. District Secondary Education Officer
8. District Information Officer
9. District Relief and Rehabilitation Officer
10. Deputy Director, Social Welfare Directorate
11. Representative of Armed Forces Division (when armed forces will be deployed)

Member Secretary: Civil Surgeon

Adviser: Local Member of the Parliament and Zilla Parishad Chariman

Terms of Reference:

1. This committee will implement orders from national committee
2. Logistic and financial support to raise awareness in mass population and quarantine when necessary
3. If any information regarding COVID-19 is obtained, this committee will take necessary action in coordination with national committee
4. Taking necessary actions regarding any other issues

Annex 8: COMMITTEE IN UPAZILLA LEVEL FOR PREVENTION AND CONTROL OF COVID-19

Chairperson: Upazila Nirbahi Officer

Members (Not according to warrant of precedence):

1. Officer in charge, Police
2. Municipality Mayor
3. Upazila Livestock Officer
4. Upazila Education Officer
5. Upazila Secondary Education Officer
6. Upazila Project Implementation Officer
7. Upazila Social Welfare Officer

Member Secretary: Upazila Health and Family Planning Officer

Adviser: Local Member of the Parliament and Upazila Parishad Chariman

Terms of Reference:

1. This committee will coordinate with district committee to implement orders from national committee
2. Logistic and financial support to raise awareness in mass population and quarantine when necessary
3. If any information regarding COVID-19 is obtained, this committee will take necessary action in coordination with district and national committee
4. Taking necessary actions regarding any other issues

Annex 9: RAPID RESPONSE TEAMS

Existing rapid response teams in different tiers will work according their TOR or as prescribed by the authority.

18/03/2020 Infectious Diseases (Prevention, Control and Elimination) Act, 20

Infectious Diseases (Prevention, Control and Elimination) Act, 20

(Act No. 8 of 27)

[November 8, 21]

Laws aimed at raising awareness, tackling infectious diseases, controlling and eliminating the need to address public health emergencies and reduce health risks.

As it is expedient and necessary to make provisions for the raising of awareness, prevention, control and elimination of infectious diseases, to address public health emergencies and reduce health risks;

Therefore, the law is hereby made as follows: -

- Short title and introduction**
2. (3) This Act shall be known as the Infectious Disease (Prevention, Control and Elimination) Act, 20 .
 - (2) It shall be effective immediately.
- Definition**
2. Unless there is anything repugnant in the subject or context, in this Act, -
 - (3) "Department" means the Department of Health;
 - (2) "Committee" means an Advisory Committee constituted under section 4;
 - (4) "empowered employee" means an employee empowered under section 4;
 - (4) "Schedule" means the Schedule of this Act;
 - (3) "carrier" means a microbial nonbonded organism carrying organisms from one animal to another;
 - (4) "Rule" means the rules made under this Act.

