Government of the People's Republic of Bangladesh

National Preparedness and Response Plan for COVID-19, Bangladesh

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Directorate General of Health Services (DGHS)

Health Service Division (HSD)

Ministry of Health and Family Welfare (MoH&FW)

স্বাস্থ্য ও পরিবার কল্যাণ মন্ত্রণালয়

DGHS.MOH&FW BANGLADESH

IEDCR

World Health Organization Bangladesh

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 28 February, 2020[1], a total of 83,652 confirmed, cases and 2,858 (CFR 3.4%) deaths in 51 countries. 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 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, 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.

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. During level 1, there is no case in the country, in level 2 there is imported case(s), in level 3, there are limited local transmission and in level 4 there is wide spread local transmission. In declining phase, there is decrease in transmission and the last stage is the recovery phases. 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

[1] 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

mechanism for developing surge capacity to manage the patients, to sustain essential services and to reduce social 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 Moitree 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, 2020[2], 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

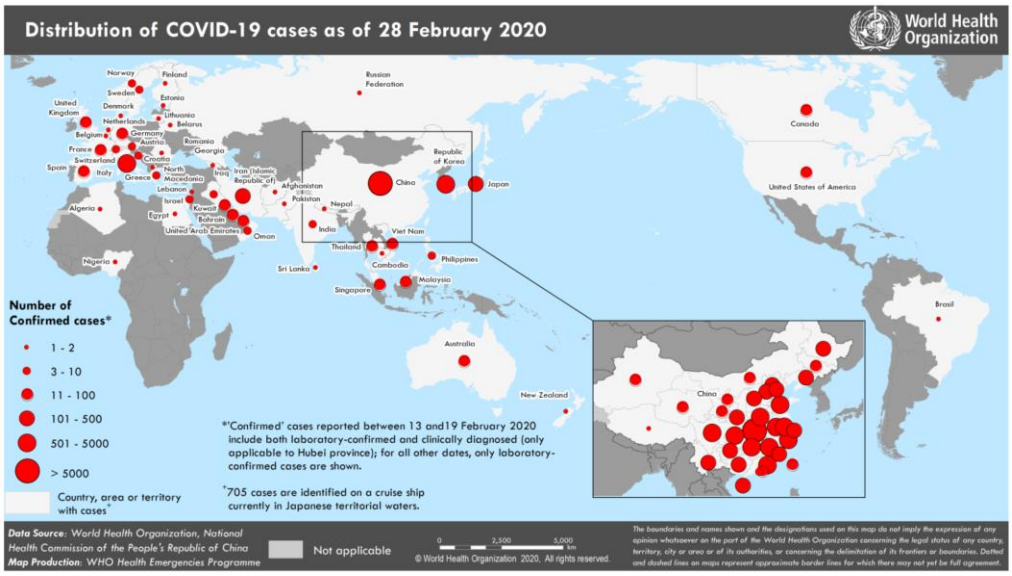

Figure 1 Countries, territories or areas with reported confirmed cases of COVID-19, 28 February 2020

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". [3]Total 914,998 population of Forcibly Displaced Myanmar Nationals (FDMNs) are living in 211,383 households in Ukhia and Teknaf Upazila of Cox's Bazar.

[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/Publicaations/HB%202018%20final.pdf

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. 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.

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

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).

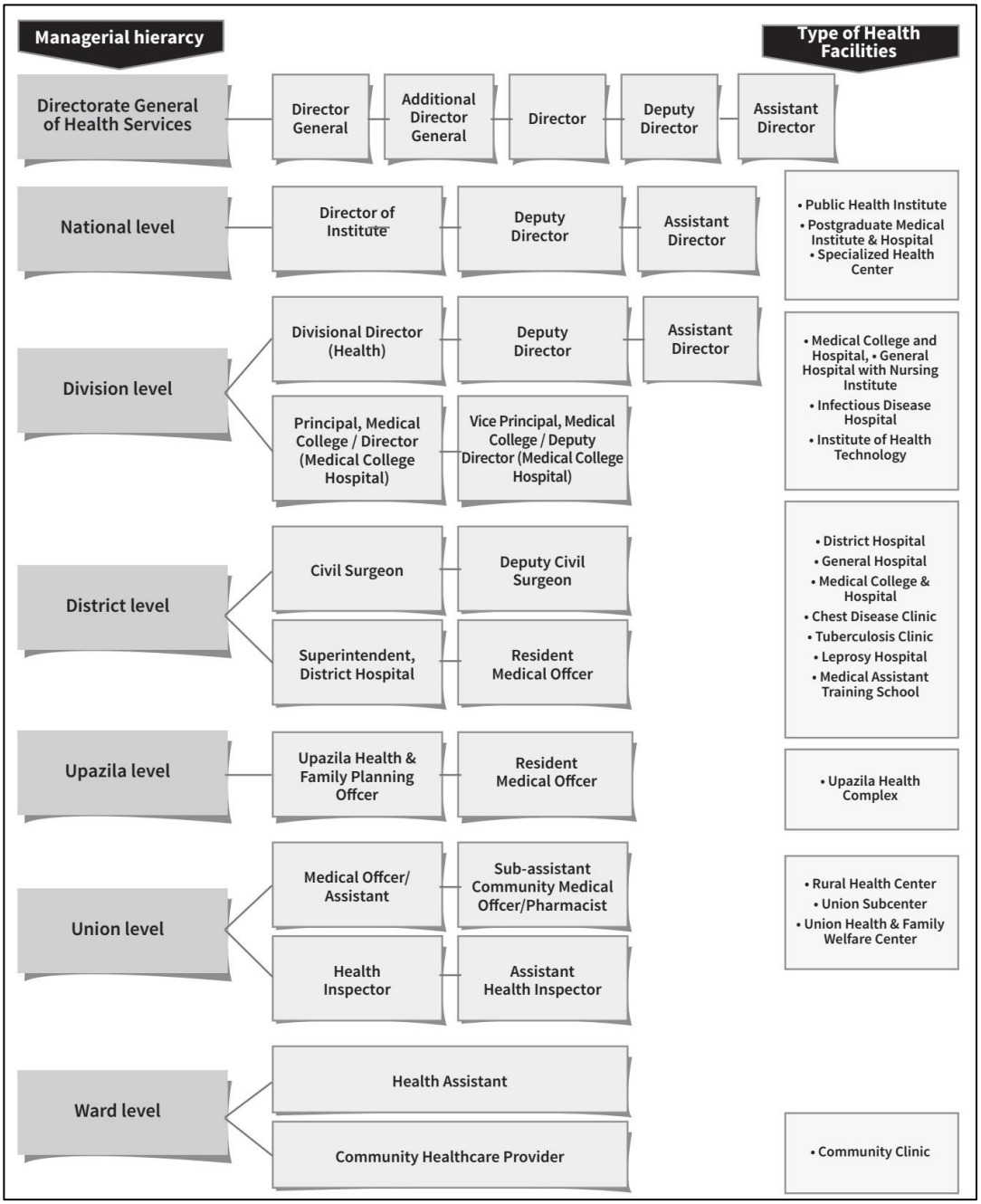

Figure 2 Managerial hierarchy according to types of facilities from national to the ward level

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).

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.

- **Country Level 1: No case is detected in the country**
  During this level no lab confirmed case is detected in Bangladesh.
- **Country Level 2: Only imported case but no local transmission**
  During this level only imported case(s) is/are found; no local transmission has occurred
- **Country Level 3: Limited local transmission**
  When few clusters are identified with 10 or less lab confirmed cases in each cluster
- **Country Level 4: Wide spread local transmission**
  When there is increased number of clusters with more than 10 cases in each cluster
- **Declining Phase: Decreasing trend within the country**
  When incidence of diseases starts to decline
- **Post Epidemic/Pandemic Recovery**
  Infection within the country ceased to occur and World Health Organization (WHO) declares that the pandemic is over.

Analysis of strengths and weaknesses of the response should be addressed and necessary capacity building according to the need should be prioritized. The COVID-19 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, Research and Development advances, good practices internationally and updated recommendations from WHO.

Objective and activities under planning and coordination

Country Level	Objective	Actions	Time Frame	Responsibility	Output/Outcome
Country level 1	1. To prepare for containment measure 2. To alert the health system 3. To develop surge capacity for patient management	1. Formulation of National Advisory Committee（NAC）, National Multisectoral Coordination Committee（NMTF）, and activation of National Technical Committee（NTC）, National Coordination Cell（NCC）, District Multisectoral Coordination Committee（DMCC）, Upazila Multisectoral Coordination Committee（UMCC）, National Rapid Response Team（NRRT）, District Rapid Response Team （DRRT）, Upazila Rapid Response Team （URRT） 2. Formation of the COVID19 Management Committee（CMC） in Hospitals 3. Activation of Rapid Response Teams（RRT）and CMC of all levels 4. Preparing containment action plan 5. Establishing contact with multisectoral stakeholders 6. Implementation of screening at the points of entry（PoE） 7. Implementation of hospital surveillance for COVID19 8. Stockpiling antivirals, supportive drugs, PPEs, disinfectants and essential supplies 9. Earmarking facilities and spaces for temporary field hospital during country level 3 10. Reinforcement of infection prevention control measures 11. Strengthening of communication activities	When country level 0	CDC, HSM, CBHC, DGHS & IEDCR	1） Respective committees formulated and activated 2） RRTs activated 3） Established contact 4） Screening started 5） Hospital surveillance implemented 6） Stockpiling done 7） Earmarked temporary field hospitals 8） Reinforcement of IPC measures 9） Strengthening communication activities

Country Level	Objective	Actions	Time Frame	Responsibility	Output/Outcome
Country level 2	1. To institute containment measure 2. To monitor epidemiological pattern of case (s)	As above, plus 1. Activation of National Advisory Committee （NAC）and National Multisectoral Taskforce Committee（NMTF）. **2.** Leading of the NMTF by Secretary, Ministry of Health and Family Welfare 3. Detection and management of cases thorough RRT 4. Ensuring follow up and contact tracing 5. Implementation of public health measures including quarantine and isolation 6. Strengthening awareness activity on respiratory hygiene and cough etiquette 7. Maintaining social distancing.	When country level 1	As above, plus MOHFW, HEB	1−2 Committee activated 3 RRT activated 4−5 Case detection, management and risk mitigation 6 Awareness activity strengthened
County level 3	1. To continue containment measure 2. To protect caregivers 3. To prevent nosocomial infection	As above, plus 1. Selection and preparing hospital for management of severe cases at national, district and upazila levels 2. Strengthening of infection prevention control in the hospital 3. Geographical lockdown of affected areas.	When country level 2	As above, plus LGRD, Ministry of Home	1. Hospitals selected. 2. IPC strengthened. 3. Geographically locked down done
Country level 4	1. To shift from containment to mitigation phase 2. To reduce morbidity and mortality	1. Honorable Prime Minister leads National Advisory Committee（NAC） 2. Cabinet Secretary leads the NMTF 3. Reactivation of the multisectoral committees of district and upazila 4. Maintaining social distancing. 5. Maintenance of epidemic supply chain.	When country level 3	As above, plus PMO, Cabinet	1. Leading the epidemic management 2. Leading the NMTF 3. MSTF reactivated 4. IPC strengthened. 5. Assessment done

Country Level	Objective	Actions	Time Frame	Responsibility	Output/Outcome
	3. To increase surge capacity for management 4. To ensure essential services 5. To reduce panic and stress	6. Reassessing and replenishing surge capacity for patient care and essential services 7. Recruitment, training and engagement of volunteers if needed 8. Establishment of makeshift hospital if necessary 9. Reinforcement of infection control measures 10. Ensuring essential services 11. Measures for reducing panic and stress through public health communication			6. Recruitment, training and engagement of volunteers 7. Makeshift hospitals established 8. IPC reinforced 9. Measures undertaken for panic stress control
Declining Phase	1. To assess the evolving situation 2. Continue management of the remaining patients 3. To continue surveillance for COVID19	1. Shifting leadership to Honorable Minister of Health and Family Welfare 2. Continuing hospital surveillance for COVID19 3. Restoring routine health care service	When in declining phase	MOHFW, DGHS, IEDCR	1. Honorable Minister in the lead. 2. Continuation of hospital surveillance. 3. Routine healthcare service restored.
Post epidemic/pandemic					

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 COVID-19 surveillance

Ongoing COVID-19 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 33 points of entry including air, sea and land ports. It 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 (recommended by WHO) 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 COVID19 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 proving support in suspected COVID-19 case detection, sample collection, sample storage and transportation to reference laboratory. In addition, the number of surveillance sites will the 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) 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

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 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

Objectives and activities for surveillance and laboratory diagnosis

COUNTRY LEVELS	OBJECTIVES	ACTION	Time frame	Responsibility	Output/Outcome
Country Level 1	1. To detect and responding to the first case in the country	Work Plan 1. Case definition 2. Module preparation & SOPs development (5 days workshop) 3. Training on disease surveillance for RRT, and persons related to surveillance at sentinel sites and surveillance staffs at Points of Entries (PoE) 4. Screening at Points of Entries (PoE)	March- April 2020	NMTF, DGHS	1. Number of ports (Sea-2+ Air-3+ land-28) started screening
		5. scale up of event-based surveillance	March- April 2020	IEDCR, IPH, DGHS	2. Number of event based surveillance done
		6. Continue community and hospital base ILI and SARI surveillance	March- April 2020	IEDCR, DGHS	3. Continuation of community and hospital-based ILI and SARI surveillance
		7. Enhance laboratory capacity at National level facilities: a. IEDCR-NIC b. IPH(NPML), DMC(Virology), BSMMU(Virology), MMC (Microbiology), BITID, SOMC (Microbiology), IEDCR Field lab at Cox's bazar Medical College	March- May 2020	DGHS, Other institutes	4. Laboratory capacity enhanced at a. IEDCR-NIC & IPH(NPML), b.DMC(Virology), BSMMU(Virology), MMC(Microbiology), BITID,SOMC (Microbiology), IEDCR

COUNTRY LEVELS	OBJECTIVES	ACTION	Time frame	Responsibility	Output/Outcome
					Field lab at Cox's bazar Medical College
Country Level 2	1. To detect the case(s) and cluster (s) 2. To determine epidemiological pattern 3. To identify the characteristics of virus	As above, plus 1. Expand ILI and SARI surveillance		1. DGHS	1. Number of districts established ILI and SARI surveillance
		2. collect epidemiological data from the cases		2. NIC/IEDCR	2. Epidemiological data collected from 100% cases
		3. To do laboratory test to detect the virus		3. a. IEDCR-NIC, IPH-NPML b.DMC (Virology), BSMMU(Virology), MMC(Microbiology), BITID, SOMC (Microbiology),	3. Laboratory test done for all suspected cases and conduction of subtype
		4. network with WHO collaboration centres for influenza		4. a. IEDCR-NIC, IPH-NPML b. after capacity development: DMC(Virology), BSMMU(Virology), MMC (Microbiology), BITID, SOMC (Microbiology),	4. Continuation of Networking with WHO collaboration centres

COUNTRY LEVELS	OBJECTIVES	ACTION	Time frame	Responsibility	Output/Outcome
				IEDCR Field lab at Cox's bazar Medical College	
Country Level 3	1. To detect the case(s) and cluster (s) 2. To determine epidemiological pattern 3. To collect information of morbidity and mortality due to COVID-19 4. To take infection control measures at laboratories, health care facilities	As above, plus 1. Outbreak investigation and response; monitor the spread of the disease 2. Continuous monitoring and evaluation 3. collect and analyze morbidity and mortality data 4. Undertake virological surveillance & research: sample collection, testing, analysis 5. Enhance laboratory biosafety and biosecurity 6. Infection prevention and control measures in health care facilities 7. Advocacy, communication social mobilization (ACSM)		1. NIC/IEDCR, DGHS, IPH-NPML 2. after capacity development: DMC(Virology), BSMMU(Virology), MMC (Microbiology), BITID, SOMC (Microbiology), IEDCR Field lab at Cox's bazar Medical College	1. case identification, management and containment 2. Situation analysis 3. Information updated 4. Lab confirmed case identifies 5. Disease containment measures taken
Country Level 4	1. To detect the cluster (s) 2. To determine epidemiological pattern 3. To collect information of morbidity and mortality due to COVID-19 4. To take infection control measures at	As above, plus 1. Focusing on COVID-19 syndromic surveillance instead of lab-based surveillance 2. Strengthen infection control measures at laboratory, surveillance sites and health care facilities		1. NIC/IEDCR, DGHS, IPH-NPML after capacity development: DMC(Virology), BSMMU(Virology), MMC (Microbiology),	

COUNTRY LEVELS	OBJECTIVES	ACTION	Time frame	Responsibility	Output/Outcome
	laboratories, health care facilities			BITID, SOMC (Microbiology), IEDCR Field lab at Cox's bazar Medical College	
Declining Phase	Continue surveillance 1. To detect the cluster (s) if any 2.To confirm declining situation and determine epidemiological pattern 3.To collect information of morbidity and mortality due to COVID-19 4.To take infection control measures at laboratories, health care facilities	As above		NIC/IEDCR, DGHS, IPH-NPML after capacity development: DMC(Virology), BSMMU(Virology), MMC (Microbiology), BITID, SOMC (Microbiology), IEDCR Field lab at Cox's bazar Medical College	
Post Epidemic pandemic / recovery level	Continue surveillance 1. To detect the cluster (s) if any 2.To confirm declining situation and determine epidemiological pattern 3.To collect information of morbidity and mortality due to COVID-19	As above		1. NIC/IEDCR, DGHS, IPH-NPML after capacity development: DMC(Virology), BSMMU(Virology), MMC	Continuation of influenza surveillance

COUNTRY LEVELS	OBJECTIVES	ACTION	Time frame	Responsibility	Output/Outcome
	4.To take infection control measures at laboratories, health care facilities 5. To help taking decision for end of the pandemic			(Microbiology), BITID, SOMC (Microbiology), IEDCR Field lab at Cox's bazar Medical College	

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 aims of risk communication:

a) To raise awareness of people on COVID-19
b) To inform people about their role in prevention and control of the disease and during outbreak
c) To reduce panic among people
d) To update policy makers, planners, implementers and others on current information on COVID-19 situation, virus spread and risk to humans

To ensure transparency on the preparedness activities and to prevent spread of misinformation and rumors, it is critical for the national health authorities to timely inform the public and media about Government's efforts to prepare for the introduction of COVID-19. The public should be educated about the symptoms of the COVID-19 and modes of transmission, and should be encouraged to adopt preventive measures and contact COVID Control Room at IEDCR by hotline (01927711784, 01927711785, 01937000011, 01937110011) when necessary.

All institutions at different levels of the health care system and all health care workers (clinical, public health professionals, laboratory, support staff, etc.) must be constantly informed about: the evolution of the COVID-19 outbreak internationally, and the relevant WHO recommendations, the characteristics and modes of transmission of the disease and any type of protocol that the country has developed, is developing, or is changing related to any response or requirements.

The MOHFW will coordinate with and advise to other relevant authorities and partners to perform preventive and control measures on a continuous basis such as:

- Organize health education activities and provide health advice on COVID-19 prevention, personal hygiene and environmental hygiene, targeting public as well as specific sectors of the community.
- Encourage regular cleaning of public areas and residents to maintain good hygiene practices.
- Develop/update appropriate IEC materials in coordination with health education bureau, disease control unit, MOHFW and others stakeholders including development partners
- Disseminate IEC materials to all levels of health facilities, educational institutions, workplaces,

entry points, transport sectors to build awareness.

- Disseminate information to hotels, targeting tourist, travel sector, hostels and housing societies on COVID-19 prevention measures
- Disseminate information to Wet Market on hygiene and infection control
- Disseminate information to community for hygiene and infection control for their livestock rearing and pet animal and birds

Ensure confidentiality of suspected patient's private information (Patient name, address etc.) at all levels of management including triage, screening, case management, diagnosis, quarantine and isolation.

The Embassies, diplomatic missions, the private sector, and other institutions that have extensively travelling personnel or operations in the countries with documented COVID-19 cases, should be kept informed about the evolution of the outbreak, the recommended measures for international travel and arrangements for the treatment of cases that may occur in this group of expatriates.

National health authorities need to identify if there are any cultural and religious practices and beliefs that may have the potential to prevent the acceptance of public health measures to control COVID-19 by the community, should there be one or more suspected and/or confirmed case of COVID-19.

Spokesperson at different levels

- Honourable Minister of Health & Family Welfare (MoHFW)
- Secretary, HSD, MoHFW
- Director General of Health Services
- Director, IEDCR
- Director, Disease Control, DGHS
- Civil Surgeon/Superintendent

Objective and activities under 'Risk communication'

Country Level	Objective	Actions	Time Frame	Responsibility	Output/Outcome
Level 1	1. To develop risk communication strategy and communication plan	1.1. Develop risk communication strategy 1.2. Develop a communication plan 1.3. Integrate communication strategy among different sectors and organizations	March – April 2020	DGHS	Strategy developed
	2. To ensure implementation of communication plan	2.1. Monitor and evaluate communication program implemented at different level 2.2. Form Communication Committees at national and other levels 2.3. Develop/update SOP for Communication pathway from COVID-19 Control Room to grassroots and vice versa		DGHS	1. Control room designated 2. Communication committee formed 3. Monitoring visit conducted 4. Communication pathway developed 5. Working route developed 6. Meeting of National Communication Committee (NCC)
	3. To ensure coordination among technical and communication staff regarding the development of the messages	3.1. Designate institution for PHEOC (Control Room) to accumulate and disseminate information, risk communication 3.2. Ensure coordination among technical and communications staff regarding development of key messages.		DGHS	PHOEC (Control Room) designated Meeting of Communication Committee Designation of working group for IEC materials

Country Level	Objective	Actions	Time Frame	Responsibility	Output/Outcome
		3.3. Designate a working group for drafting and developing IEC materials 3.4. Convene national communication committee meeting			
	4. To ensure human resources and logistic supply for effective communication	4.1. Ensure human resources for risk communication 4.2. Ensure logistic support for effective communication;		DGHS	Human resource mobilized logistics procured and supplied
	5. To raise awareness, motivate people and conduct behavioural change communications (BCC) activities (e.g., for infection prevention and control)	5.1 Develop and disseminate information, education & communication (IEC) materials on COVID-19 suitable for mass people using mass media, interpersonal communication group discussion, announcements etc 5.2 Conduct advocacy seminar, open air performances and other social mobilization activities on a regular basis at extensive level		DGHS	IEC material developed and distributed Advocacy seminar, open air events performed, other social mobilization activities conducted
	6. To guide people for action	6.1 Establish a community mobilization network across the country		DGHS	Community mobilization network established

Country Level	Objective	Actions	Time Frame	Responsibility	Output/Outcome
	7. To undertake official communication	7.1. Issuing an Official Letters as and when required 7.2. sending reports			Official letter Issued Reports prepared and sent
	8. To ensure transparency on the preparedness activities and to prevent spread of misinformation, stigmatization and rumours	8.1. Set up a telephone hotline and interactive website to answer public inquires and collect information as and when needed and to provide feedback. 8.2. Familiarize news media with national plan, preparedness activities and decision-making, related to COVID-19 for effective dissemination. 8.3. Designate spokesperson at different levels level of Health sector 8.4. Develop mechanisms to promptly respond to rumours and inaccurate information to minimize concern, social disruption, stigmatization and correct misinformation.		DGHS	Hotline and interactive website established Press briefing conducted and press release issued Spokesperson designated
	9. To update professionals and officials with information on	9.1. Update professionals of relevant sectors and all stakeholders on risk and prevention through training,		DGHS	workshop, training, orientation for professionals completed

Country Level	Objective	Actions	Time Frame	Responsibility	Output/Outcome
	current COVID-19 situation and their roles in the preparedness activities	workshops, seminars and other sensitizing meetings;			
Level 2:	1. To intensify the activities done during level 1 2. To minimize impact, such as social disorder and disruptions of economic activities 3. To ensure effective response by providing information timely and accurately to all stakeholders	1.1. Report COVID-19 cases to WHO by NFP IHR 1.2. Convene National Communication Committee (NCC) meeting 1.3. Use all channels to disseminate information relating to disease and methods of protection. 1.4. Ensure confidentiality of patient's private information (Patient name, address etc.) at all levels of management including triage, screening, case management, diagnosis, quarantine and isolation. 1.5. Publication of booklets, leaflets, development of common health messages & education materials 1.6. Explore community resources, such as hotlines and websites to respond to local questions.			NFP IHR reported cases Target group identified List of media channel developed SOP on confidentiality developed IEC materials published Hotlines, website functioning

Country Level	Objective	Actions	Time Frame	Responsibility	Output/Outcome
Level 3: clusters are identified	4. To develop and disseminate information materials on emergent health issues 5. To raise awareness, motivate people and other stakeholders 6. To guide people for action 7. To undertake official communication	As above, plus 1.1. Convene meeting of the National Communication Committee 1.2. Promptly respond to rumors and inaccurate information 1.3. Provide daily updates of the course of the outbreak and governmental response actions; 1.4. Reinforce health education on the symptoms COVID-19, when and where to seek medical attention or treatment; 1.5. Step up public education on the infection prevention at a personal, household and community levels; 1.6. Engage community NGOs and professional groups as partners in risk communication and health education; 1.7. Systematically collect feedback from communities, including through social media monitoring; direct dialogue with individual and communities; hotline and surveys;		DGHS	Meeting of NCC held Press briefing conducted and press release issued Advertisement in print and electronic media published Orientation with professional and community organizations, journalists Hotline, interactive website continue Feedback to social media queries IEC materials published Meeting with WHO held

Country Level	Objective	Actions	Time Frame	Responsibility	Output/Outcome
		1.8. Prepare IEC materials to provide clear guidance on extra preventive measures to be taken and inform doctors, dentists, other health care professionals, private hospitals, institutions, tourist agencies, and the public of such measures; and 1.9. Liaise with WHO on possible warning in travel advisory for Bangladesh.			
Level 4	1. To develop and disseminate information materials on emergent health issues 2. To raise awareness, motivate people and other stakeholders 3. To guide people for action 4. To undertake official communication	1.1. Continue all the activities stated above plus 1.2. Review all the IEC materials and update as appropriate 1.3. Risk communication for Infection Prevention and Control (IPC) at health facilities, communities, mortuaries and burials		DGHS	Revised IEC materials published Risk communication material on IPC developed
Declining phase	1. To inform people about the country status	1.1. Develop IEC materials to inform people about decreasing number of cases		DGHS	IEC materials developed and printed

Country Level	Objective	Actions	Time Frame	Responsibility	Output/Outcome
Post Epidemic pandemic / recovery level	1. To activate routine awareness program for prevention and control of COVID-19	1.1. Continuation of awareness program for prevention and control of COVID-19 as in alert level			Awareness program continued

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.

a. Screening of passengers before arrival

Screening of passengers before arrival will be conducted as per SOP. This will be conducted to identify suspected cases of COVID-19 before arriving at the points of entry. The instructions will be circulated as per contingency plan.

b. 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 include

- Availability of trained Personnel and supplies
- Space and guideline 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

2. 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.

Objective and Activities at Points of Entry (PoEs)

Country Level	Objective	Actions	Time Frame	Responsibility	Output/Outcome
Level 1	○ To strengthen all PoEs for screening of passengers ○ To activate and strengthen "Corona Control Room" (PHEOC)	Formation & activation of different Committees (NAC, NMSTF, NTC, Core Com etc) & Sub-Committees	Jan-March 2020	HSD, MoH&FW, DGHS	On going
		Update Contingency Plan		CDC	Drafted
		Development and update of SOPS on • Screening of passengers at PoEs • Management and transfer of suspected case from PoEs • Management of suspected case in aircraft and other vehicles • Referral and transport of suspected cases • Disinfection & Decontamination		CDC, IEDCR	Ongoing
		Ensure procurement and continuous supply of equipment, logistics (PPE, hand held thermometer, printed materials, eg- Health declaration form, Health card, Patient locator forms, Public health message/ leaflet, consent form for quarantine etc) at all ports		CDC	Ongoing
		Ensure screening of Passengers at all ports		CDC, IEDCR, Port health authority	Ongoing
		Conduction of regular Simulation exercise		CDC	Done
		Training of relevant personnel		CDC	Ongoing
		Carry out resource mapping/ mobilization		CDC, IEDCR	Ongoing

Country Level	Objective	Actions	Time Frame	Responsibility	Output/Outcome
		Prepare Quarantine facilities		HSD, MOH&FW, MODM&R	On going
		Prepare & designate Health Care facilities		DGHS, Director Hospital	On going
		Distribute Health message for the passengers		CDC, AHO, CMT	On going
		Provision of risk allowance		Ministry of finance and MOHFW	
Level 2	○ To strengthen and monitor of PoEs screening and surveillance activities ○ To activate Crisis Management Team (CMT) at PoEs	Carry out regular meeting of different Committees (NAC, NMSTF, NTC, Core Committee etc) & Sub-Committees.		HSD, MoH&FW, DGHS	On going
		Strengthen screening activities using following materials • Health declaration forms • Health card • Public Health message/ Leaflet • Patient Locator Forms • Consent form for Quarantine		CDC, IEDCR, AHO, CAAB	Ongoing
		Ensure Procurement and continuous supply of PPE, other equipment/ logistics		CDC	Ongoing
		Activation of CMT		AHO, CMT, CAAB	

Country Level	Objective	Actions	Time Frame	Responsibility	Output/Outcome
Level 3	○ To strengthened and monitor PoEs Surveillance activities ○ To activate Crisis Management Team (CMT) at the PoEs	Carry out regular meeting of different Committees (NAC, NMSTF, NTC, Core Com etc) & Sub-Committees		HSD, MoH&FW, DGHS	Planned
		Continue activities of level- 2		CDC, IEDCR, Port Health Authority, CAAB, AOC, BB	
		Carry out refresher/ on job training		CDC, IEDCR	Ongoing
Level 4	○ To strengthened and monitor POEs Surveillance activities	Ensure regular meeting of different Committees (NAC, NMSTF, NTC, Core Com etc) & Sub-Committees		HSD, MoH&FW, DGHS	Planned
		Maintain continuous supply of logistics at PoEs		CDC	
		Continue activities of level- 3		CDC, IEDCR, Port Health Authority, CAAB, AOC, BB	Ongoing

Country Level	Objective	Actions	Time Frame	Responsibility	Output/Outcome
Declining Phase	○ To Mitigate the impact of epidemic	Ensure regular meeting of different Committees (NAC, NMSTF, NTC, Core Com etc) & Sub-Committees		HSD, MoH&FW, DGHS	Planned
		Close and restrict non-essential services at all PoEs		NAC	Planned
		Prepare guideline for closing of non-essential services		CDC, IEDCR, Port Health Authority, CAAB, AOC, BB	Planned
		Continue activities of level- 4		CDC, IEDCR, Port Health Authority, CAAB, AOC, BB	Ongoing

Section 5. Case management

Write up needed

Country Levels	Objectives	Action	Time Frame	Responsibility	Output/Outcome
Level 1	1. To prepare, designated Health care facilities for management of Suspected and confirm cases	1) Formation & activation of Technical Sub-Committees On COVID-19 Case management and IPC Prepare National management guidelines • Mild case Home care • Moderate, Severe, Comorbid cases Hospital care Designate & Prepare • Health care centers for isolation of suspected COVID patient • Health care centers for COVID-case hospitalization & management • Arrange Ambulance facilities 4) Train Health Care Providers(HCPs) • Medical team training on PUI (Person Under Investigation), Triage and COVID-19 Suspected/Confirm case definition • Orientation on COVID-19 cases Diagnosis & management. • Orientation on IPC • Orientation on use of PPE	Feb-Mar 2020	HSD, MOHFW, DGHS IEDCR MOHFW CDC & IEDCR Director Hospital	On going On going On going On going On going

Country Levels	Objectives	Action	Time Frame	Responsibility	Output/Outcome
		5) Ensure Documentation • Prepare forms for information (history, PH Reporting) of all arrival passengers (all ports) 6) Ensure all Medical supplies , PPE and logistics as necessary to Designate COVID-care health care centers for proper management 7) Prepare resource Mapping & Mobilization 8) Activation of "Corona Control Room" (PHEOC) 9) Development of SOPs o Patient Screening o Patient Triage o Donning & Doffing of PPE IEDCR o Health Care setting IPC o Ambulance decontamination 10) Provision of risk allowance		CDC, Director Hospital MOHFW IEDCR IEDCR, CDC	On going On going Activated On going
Level 2	1. To manage COVID-19 Cases	1) Make certain patient management • Patient Triage • Follow COVID-19 guidelines • Ensure IPC practice at the Health care center • Confirm availability of designated Ambulance • Ensure Confidentiality		Director Hospital CDC & IEDCR	Service available and in practice

Country Levels	Objectives	Action	Time Frame	Responsibility	Output/Outcome
	2. To activate all designated health care facilities	1)Activate all designated health care facilities (HCF) for case management • Activation and make functioning of all the designated hospitals • Ensure Medicine and logistics supplies. • Refresher training of Medical teams and all HCP on COVID-19 management and IPC • Strict implementation of Infection Prevention & Control measures • Case reporting to 'Corona Control Room (PHEOC)', IEDCR and increase "National Alert level" • Resource mobilization (Human resource & Medical supplies)		HSD, MOHFW DGHS	All designated HCF prepared
Level 3	1.To Strengthen Patient care	1) All above for Level-2 and 2) Ensure IPC Practice • For health care providers • Accommodation for Medical team/HCP • Support Staff 2) Ensure Medical supplies and equipment 3) Development of SOPs • Critical Patient transfer to better care facilities		Director Hospital CDC & IEDCR Director Hospital CDC CDC & IEDCR	Ongoing Ongoing ongoing

Country Levels	Objectives	Action	Time Frame	Responsibility	Output/Outcome
Level 4	1.To decrease the morbidity and mortality	1) All above for Level-3 and 2) Ensure early detection and management of case(s) of new wave.		Director Hospital IEDCR	Ongoing
	2.To Strengthen IPC	3)Ensure IPC Practice 4) Carry out refreshers training		CDC & IEDCR	
Declining phase	1.To decrease the morbidity and mortality	1) All above for Level-4 and		Director Hospital IEDCR	
	2. To strengthen IPC	1)Ensure IPC Practice 2) Refreshers training		CDC & IEDCR	

Section 6. Infection Prevention and Control

Write up needed

Quarantine

Bangladesh will ensure emergency contingency protocols to support quarantine according to the "Infectious Disease (Prevention, Control and Elimination) act 2018" (Annexure). 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.

Objective and activities under Infection Prevention Control

Country Levels	Objectives	Action	Time Frame	Responsibility	Output/Outcome
Level 1	1. To prevent infection among high risk group 2. To prepare for infection prevention and control	1. Strengthening screening process in all PoEs 2. Development and updating of Guidelines, SOPs 3. To provide refresher training on infection control and safety practices for people at risk. 4. To enhance community awareness programme. 5. To provide PPEs, protective equipment's and disinfectants for people at risk.	Level 1	CDC, IEDCR	On going On going Refresher training provided Awareness program enhanced PPEs and disinfectants provided
Level 2	1. To contain and control the infection within isolation center	1. As above and 2. To do prompt laboratory confirmation and rapid management case/s according to guideline (Annexure 2.1) 3. To ensure quarantine, home isolation and hospital isolation 4. Prepare document for IPC during Quarantine (home quarantine, facility quarantine, Community Quarantine)	Level 2	1. CDC, IEDCR	
Level 3	1. To contain the disease within the community/ hospital	1. As above and 2. To strengthening non pharmaceutical interventions including social distancing 3. To ensure adequate supply of drugs, PPEs, disinfectants according to need of the area	Level 3	1. DGHS, IEDCR 2.DGHS	

Country Levels	Objectives	Action	Time Frame	Responsibility	Output/Outcome
Level 4	1. To prevent further spread 2. To limit infection to other species to prevent further spread	1. As above and 2. To adopt social distancing if needed 3. To strengthen infection prevention and control practice in animal health	Level 4	DGHS, IEDCR	
				DGHS, IEDCR, DLS	
Declining phase	1. To Mitigate of the impact of pandemic	1. Continue infection control practices in community and in hospital setting 2. Closure of non-essential services. 3. Implementation of social distancing	When at declining phase	DGHS, IEDCR	

Section 7. Referral and patient transport

Write up needed

Country Levels	Objectives	Action	Time Frame	Responsibility	Output/Outcome
Level 1	1.To prepare Referral System of suspected case from POE to Isolation center 2.To prepare Referral System for Critical confirm case to designated health care facility	1.Develop SOPs for Referral System of suspected case from POE to Isolation center • Designate Health care facilities • Designate Ambulance 2.Prepare Referral System for Critical confirm case to better health care facility • Designate Health care facilities • Ensure IPC SOPs • Guidelines for diagnosis of Critical patient • For critical patient transfer • Disinfection of Ambulance • PPE use	**Level 1**	IEDCR Director hospital IEDCR Director hospital lEDCR	On going On going
Level 2-5	1. To confirm referral system to designated health care facility 2. To ensure referral system for Critical confirm case to designated health care facility	1. Designate Health care facilities for Confirm cases 2. Designate Health care facilities for Critically ill patient 3. Use of SOPs 4. Ensure IPC		Director hospital lEDCR	On going

Section 8. Disposal of dead body

Write up needed

Objective and activities for disposal of body

Country Levels	Objectives	Activities	Time frame	Responsibility	Outcome
Level 1	To prepare safe disposal of dead body	• Preparation of SOP for dead body disposal • Training of religious leaders, mortuary staffs • Arrangements and supply of PPEs and other logistics • Formation of dead body disposal team • Preparation of a dedicated ambulance to carry deceased patient		HSD,MOHFW, MoLGRDC, Ministry of religious affairs, Anjumane mofidul,	
Level 2-5	To Handle the dead body with proper precaution	• Ensure protective equipment and logistics for disposal of body • Perform swab collection and post mortem (if necessary) using safe working techniques • Proper transportation to Mortuary • To carry out Proper family formalities • Ensure infection control measures • Taking protective measure to protect from biohazard risk • Carry out Family viewing and Funeral formalities • The burial procedures should be done as soon as possible. • Do not open the body bags.		HSD,MOHFW, MoLGRDC, Ministry of religious affairs, Anjumane mofidul,	

Annex 1: Case Definition of COVID –19

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 aetiology that fully explains the clinical presentation.

ii. Probable Case

A suspect case for whom testing for COVID-19 is inconclusive[1]

iii. Confirmed Case

A person with laboratory confirmation of COVID-19 infection, irrespective of clinical signs and symptoms.[2]

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 ADVISORY COMMITTEE (NAC) (Proposed)

Members (Not according to warrant of precedence):

1. Chairperson: Minister, Ministry of Health and Family Welfare
2. Members:
    a. Secretary, Ministry of Commerce
    b. Secretary, Ministry of Environment and Forest
    c. Secretary, Ministry of Finance
    d. Secretary, Ministry of Law, Justice and Parliamentary Affairs
    e. Secretary, Ministry of Fisheries and Livestock
    f. Secretary, Ministry of Defense
    g. Secretary, Ministry of Home Affairs
    h. Secretary, Ministry of Foreign Affairs
    i. Secretary, Ministry of Secondary and Higher Education
    j. Secretary, Ministry of Primary and Mass Education
    k. Secretary, Ministry of Information
    l. Secretary, Local Government, Rural Development and Cooperative
    m. Secretary, Ministry of Agriculture
    n. Secretary, Ministry of Food, Disaster Management and Relief
    o. Secretary, Ministry of Civil Aviation and Tourism
    p. Secretary, Ministry of Social Welfare
    q. Secretary, Ministry of Women and Children Affairs
    r. Secretary, Ministry of Road, Transport and Bridges
    s. Secretary, Ministry of Railway
    t. Secretary, Ministry of Religious Affairs
    u. Representative of Honorable Prime Minister
    v. Director General (Health Services Division), DGHS
    w. Additional Director General (Planning and Development), DGHS
    x. Director (Disease Control), DGHS
    y. Director, IEDCR
3. Member Secretary: Secretary HSD, Ministry of Health and Family Welfare

**The Hon'ble Minister of the lead Ministry will chair and Secretary of the lead ministry will act as Member-Secretary.*

**In the event of preoccupation of Honorable Minister(s), their representatives will act on their behalf.*

Terms of reference (TOR)

1. Endorsement of the National Plan.
2. Review and endorse amendment(s) of the National Plan
3. Decision on proposals sent by MTF
4. Support implementation of the National Plan
5. Monitor/review the activities under the plan
6. Convene at least once in a year, and as & when required
7. Co-opt member (s) when necessary

Annex 4: NATIONAL MULTI-SECTORAL TASK FORCE (NMTF) (Proposed)

Members (Not according to warrant of precedence):

1. Chairperson: Secretary HSD, Ministry of Health and Family Welfare
2. Members:
   - i. Secretary Medical Education and Family Planning, Ministry of Health and Family Welfare
   - ii. Secretary, Ministry of Fisheries and Livestock
   - iii. Secretary, Ministry of Commerce
   - iv. Secretary, Ministry of Environment and Forest
   - v. Secretary, Ministry of Finance
   - vi. Secretary, External Resource Division
   - vii. Secretary, Ministry of Law, Justice and Parliamentary Affairs
   - viii. Secretary, Ministry of Defense
   - ix. Secretary, Ministry of Home
   - x. Secretary, Ministry of Foreign Affairs
   - xi. Secretary, Ministry of Education,
   - xii. Representative from Prime Minister Office
   - xiii. Secretary, Ministry of Information
   - xiv. Secretary, Local Government, Rural Development and Cooperative
   - xv. Secretary, Ministry of Agriculture
   - xvi. Secretary, Ministry of Food and Disaster Management
   - xvii. Secretary, Ministry of Civil Aviation and Tourism
   - xviii. Secretary, Ministry of Social Welfare
   - xix. Secretary, Ministry of Religious Affairs
   - xx. Prof. Dr. ABM Abdullah, Medicine specialist and Chief Physician of honorable Prime Minister
   - xxi. Director General of Health Services
   - xxii. Director General of Livestock Services
   - xxiii. Chief Conservator of Forest, Forest Department
   - xxiv. Director General Medical Services (Ministry of Defense)
   - xxv. Director General of BGB
   - xxvi. Inspector General of Police
   - xxvii. Director General of Ansar and VDP
   - xxviii. Director General, NGO Bureau
   - xxix. Director DC & LD (Communicable Disease Control)
   - xxx. Director, Institute of Epidemiology, Disease Control & Research (IEDCR)
   - xxxi. Representative from FBCCI
   - xxxii. Representative from Bangladesh Medical Association (BMA)
   - xxxiii. Representatives of relevant UN bodies

The Secretary of the lead Ministry will chair and Director General of Health Services will act as Member-Secretary.

Terms of reference

1. Endorsement of the National Plan before sending for approval by NAC.
2. Decision on proposals sent by National technical committees
3. Support implementation of the National Plan
4. Reorganization of communication wing
5. Approval of communication materials reviewed by communication wings
6. Review and propose amendment of the National Plan
7. Monitor and evaluate the activities within the different stages of the plan implementation
8. Meet every six month and when the country situation requires
9. Co-opt member (s) when necessary

Annex 5: Communication Committee (CC) (Proposed)

Members (Not according to warrant of precedence):

1. Additional Secretary, (Public Health and WHO), MoHFW
2. Director, Disease Control, DGHS, Member
3. Director, MIS, DGHS
4. Director, IEDCR
5. Line Director, Life Style and Health Education and Promotion (L&HEP), DGHS
6. Representative from Ministry of Information (BTV/Bangladesh Betar)
7. Deputy Secretary (Public Health and WHO), MoHFW
8. Representative from UNICEF
9. Representative from WHO
10. Consultant, IHR, CDC, DGHS
11. Program Manager, IHR, CDC, DGHS

The Additional Secretary of the lead Ministry will chair and Program Manager, IHR will act as Member-Secretary.

Terms of Reference:

1. Review and approval of the communication strategy.
2. Review and approval of communication materials.
3. Monitor and evaluate the status of approved printed communication materials
4. Meet at least two monthly and when necessary
5. Co-opt member if necessary

Annex 6: National Technical Committee (Proposed)

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 (Member Secretary)
4. Director (Hospital), DGHS
5. Line Director (HSM), DGHS
6. Line Director, CBHC, DGHS
7. Director, Planning and Research, DGHS
8. Director, IEDCR
9. Director, NIDCH
10. Director, IPH
11. Representative, DGMS, Ministry of Defense
12. Chief, Health Education Bureau, DGHS
13. Representative of Medicine Society
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, UNICEF
19. Representative, WHO
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 7: National Coordination Committee (Proposed)

Members (Not according to warrant of precedence):

1. Prof. Dr. ABM Abdullah, Medicine specialist and Chief Physician of honorable Prime Minister (Advisor)
2. Director General of Health Services (Chairperson)
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. Representative of BMA
15. Representative of Medicine Society
16. Representative of Public Health Association
17. Representative of Medical Virology
18. Representative, DGMS
19. Representative, WHO/US CDC/Other development partners
20. Representative, DGDA
21. Representative, CMSD
22. Deputy Program Manager, IHR, CDC, DGHS
23. Consultant, IHR, CDC, DGHS
24. Consultant, IEDCR
25. AD control room, DGHS
26. Assistant Director (Coordination), DGHS
27. Program Manager, IHR, Communicable Disease Control, DGHS

Terms of Reference:

1. Review and decision on evolving issues of COVID-19
2. The committee will be functioning as and when necessary 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 different committees of different level as and when necessary
5. The committee may co-opt members

Annex 8: DISTRICT MULTISECTORAL COORDINATION COMMITTEE (DMCC) (Proposed)

Advisor:

1. Member of Parliament
2. Mayor of the Pouroshova of the district headquarter
3. Chairman, Sadar Upazila

Members (Not according to warrant of precedence):

1. Deputy Commissioner (Chairman)
2. Superintendent of Police
3. Civil Surgeon (Member Secretary) *
4. Deputy Director, Agriculture extension
5. Executive Engineer, LGED
6. District Primary Education Officer
7. District Secondary Education Officer
8. District Social Welfare Officer
9. District Information Officer
10. District Adjutant of Ansar and VDP
11. Upazila Nirbahi Officer (Sadar)
12. Upazila Health & Family Planning Officer (Sadar)
13. Upazila Livestock Officer (Sadar)
14. Representative from BGB (if any)
15. Representative from Army Medical Corps (if any cantonment in that district)
16. President, local Chamber of Commerce
17. Director/Superintendent of MCH/Sadar Hospital
18. President, Local Bangladesh Medical Association (BMA)
19. President, Local Press club

**According to situation of outbreak Civil Surgeon will act as Member Secretary*

Terms of Reference:

1. Coordination and Implementation of district COVID-19 activities
2. Monitor and evaluation of upazilas multi sectoral activities
3. Implement activities whatever National Multisectoral Coordination Committee/NTC directs
4. Take appropriate measures to control cross border spreading of COVID-19 (in border districts)
5. Ensure and take measures what technical committees recommend.
6. Meet monthly and whenever necessary.
7. Co-opt member (s) if necessary
8. Implement measures of social distancing and monitoring.

Annex 9: UPAZILA MULTISECTORAL COORDINATION COMMITTEE (UMCC) (Proposed)

Advisor:

1. Chairman, Upazila parishad
2. Mayor of Pouroshova (if any)

Members (Not according to warrant of precedence):

1. Upazila Nirbahi Officer (Chairperson)
2. Vice Chairman, Upazila Parishad
3. Mahila Vice Chairman, Upazila Parishad
4. Upazila Health & Family Planning Officer (Member Secretary) *
5. Upazila Livestock Officer
6. Upazila Agricultural Officer
7. Upazila Engineer, LGED
8. Officer in-charge, Thana
9. Upazila Ansar & VDP Officer
10. Upazila Primary Education Officer
11. Upazila Social Welfare Officer
12. Union Parishad Chairman (All)
13. Representative, Local Press Club

Terms of Reference:

1. Coordination and Implementation of COVID-19 activities
2. Implement activities whatever District Multisectoral Coordination Committee direct
3. Ensure and take measures what technical committees recommend.
4. Meet monthly and whenever necessary.
5. Co-opt member (s) if necessary

Annex 10: National Rapid Response Committee (NRRC) (Proposed)

Members (Not according to warrant of precedence):

The NRRT consists of members from different departments of IEDCR and partner institutes with Director of IEDCR as Convener and one senior officer of IEDCR as Member Secretary

Director, IEDCR (Convener)

CSO, Epidemiology, IEDCR (Member Secretary)

Members

1. PSO, Epidemiology, IEDCR
2. PSO, Microbiology, IEDCR
3. PSO, Virology, IEDCR
4. PSO, Parasitology, IEDCR
5. PSO, Entomology, IEDCR
6. PSO, Medical Sociology, IEDCR
7. PSO, Biostatistics, IEDCR
8. PM, IHR, CDC, DGHS
9. DPM, IHR, CDC, DGHS
10. Consultant, IHR, CDC, DGHS
11. Clinician (Medicine, Pediatrics, Psychiatry)/Relevant personnel from other partner institutions/sectors (when and where needed)

Terms of Reference:

1. Surveillance for COVID-19
2. Conduct Outbreak investigation of COVID-19 in the country
3. Surveillance of High-Risk group
4. Collection and transportation of specimens to reference laboratories when necessary
5. Undertake risk communication strategy and dissemination
6. Conduct research related to the outbreak
7. Provide technical support to National Technical Committee

Annex 11: DISTRICT RAPID RESPONSE COMMITTEE(DRRC) (Proposed)

Advisor:

1. **Divisional Director, Health**
2. **Director, Medical College Hospital**

Members (Not according to warrant of precedence):

1. Civil Surgeon (Convener)
2. Superintendent of government hospital
3. Deputy Civil Surgeon
4. MODC, Civil Surgeon (Member Secretary)
5. Resident Medical Officer (RMO)
6. Consultant, Medicine
7. Consultant, Pediatrics
8. Consultant, Pathology
9. Upazila Health & Family Planning Officer (Sadar)
10. Surveillance and Immunization Medical Officer (SIMO), WHO
11. District Public Health Nurse
12. District Senior Medical Technologist

Terms of Reference:

1. Investigation for suspected COVID-19 case or clusters.
2. Prepare District Hospital for COVID-19 patient and their management
3. Coordinate with DMCC
4. Provide technical support to District Multi Sectoral Coordination Committee
5. Implement and Monitor social distancing, isolation and quarantine

Annex 12: UPAZILA RAPID RESPONSE COMMITTEE(Proposed)

Members (Not according to warrant of precedence):

1. Upazila Health & Family Planning Officer (UH&FPO) (Convener)
2. Resident Medical Officer (RMO)
3. Medical Officer (Disease Control) (Member Secretary)
4. Consultant, Medicine
5. Consultant, Pediatrics
6. Nursing Supervisor
7. Health Inspector
8. Sanitary Inspector
9. Laboratory Technologist

Terms of Reference:

1. Investigation for COVID-19 case
2. Coordinate with Upazila RRT
3. Provide technical support to Upazila Multi Sectoral Coordination Committee

Annex 13: COVID-19 Management Committee in Hospitals (Proposed)

The URRT and DRRT will act as Management Committee respectively at Upazila Health Complex and district hospital. For the district modern hospitals (with bed capacity of 200 and more), tertiary and specialized hospitals the structure of the Management Committee is as follows

- Convenor: Director/Superintendent
- Co-Convenor: Civil Surgeon, Principal of Medical college (if applicable)
- Member Secretary: Resident Physician, Medicine
- Members:
    1. Head, Department of Medicine
    2. Head, Department of Paediatrics
    3. Head, Department of Microbiology/Virology/Pathology
    4. In-Charge ICU/Influenza ward (Where applicable)
    5. Resident Physician, Paediatrics
    6. Chest physician
    7. In-Charge Emergency Department
    8. SLPP/SSO
    9. Matron
    10. Ward Master
    11. Co-opted member (s)

Terms of Reference

1. Review of pandemic situation in relation to the respective hospital
2. Liaison with relevant authority
3. Inventory of MSR and replenishing as necessary
4. Reporting and notification to proper authority
5. Manage patients according to national guideline and SOP
6. Undertake infection control measures
7. Public health communication as and when necessary

Annex 14: Technical Working Group (TWG) on surveillance (Proposed)

Members (Not according to warrant of precedence):

1. Chair: Director General of Health Services
2. Vice-Chair: Additional Director General (Planning and Development), DGHS
3. Member Secretary: Director, disease control unit, DGHS
4. Director, IEDCR
5. Director, IPH
6. Director, Hospitals and Clinics, DGHS
7. Public health/surveillance specialists
8. Virologists

Terms of Reference:

1. Committee will provide technical support to IEDCR and CDC-DGHS for surveillance, outbreak response and laboratory investigation (if necessary) for COVID-19.
2. The committee can co-opt members