

The image features a decorative header at the top with a horizontal bar divided into five colored segments: green, blue, orange, red, and yellow. Below this, the background is a light blue gradient with several darker blue diagonal stripes running from the top-left to the bottom-right.

BRICS

BRICS COUNTRIES MEASURES
TAKEN IN THE FIELD OF
HEALTHCARE
TO COUNTER THE SPREAD
OF THE CORONAVIRUS
DISEASE (COVID-19)

BRICS
November 2020



"Ultimately, the greatest lesson that COVID-19 can teach humanity is that we are all in this together."

Kiran Mazumdar-Shaw



INTRODUCTION

Background

On 31 December 2019, WHO was informed of cases of pneumonia of unknown cause in Wuhan City, China. On January 7, 2020, the Chinese authorities received an isolate of the coronavirus. On January 13, 2020, new cases of infection were detected outside the People's Republic of China (Thailand). January 30, 2020, WHO Director-General Dr Tedros declared the 2019 coronavirus outbreak a Public Health Emergency of International Concern. On February 28, 2020, WHO has upgraded its global risk assessment from high to very high. On March 11, 2020, the epidemic was recognized as a pandemic.

Goal

To present in a concise form the measures taken by BRICS member states to counter the spread of COVID-19, in order to accumulate the most effective practices and positive experience. Information on BRICS member states is presented in accordance with the following sections*:

- Country-level coordination, planning, and monitoring;
- Risk communication and community engagement;
- Surveillance, rapid response teams, and case investigation;
- Points of entry;
- National laboratories;
- Adaptation of the applied practice of prevention and control of infections (inside and outside medical institutions);
- Case management;
- Logistics support for operational measures;
- Any other relevant information.

*Sections (pillars) from the WHO COVID-19 Strategic Preparedness and Response Plan Operational Planning Guidelines to Support Country Preparedness and Response (version 12 February 2020) are included in this questionnaire. Link to the electronic source: <https://www.who.int/docs/default-source/coronaviruse/covid-19-sprp-unct-guidelines.pdf>

THE FEDERATIVE REPUBLIC OF BRAZIL



Country-level coordination, planning, and monitoring

National public health emergency management mechanisms should be activated with engagement of relevant ministries such as health, education, travel and tourism, public works, environment, social protection, and agriculture, to provide coordinated management of COVID-19 preparedness and response. NAPHS and PIPPs, if available, should also be adapted to address COVID-19.

The Unified Health System (Sistema Único de Saúde – SUS), created in 1990, as a constitutional mandate, brings health care to more than 215 million people, throughout the 5570 municipalities of the 5th largest country in the world. SUS is a pivotal social and economic policy that provides universal and equal access to health care services, including promotion, protection and recovering of the Brazilian population.

The Brazilian National Health System is organized in a decentralized and hierarchized network, with particular mandates in the three levels of governance – national, state and municipality. The System also provides access to comprehensive health care, free of charge at the point of care, including primary care to tertiary services. Community participation, through health councils located at the delivery levels, is the third pillar of this structure.

SUS governance model allows swift surveillance, response and treatment in emergence scenarios in full compliance with the International Health Regulations (IHR). WHO was immediately notified after our first case was confirmed and Brazil shares information daily with WHO and its member states on the general context of the response to the pandemic. The National Health System (SUS) itself is the main response to such epidemic like COVID-19.

Declaration of a Public Health Emergency of National Importance by Covid-19 (Decree MS No. 188, of 03/02/2020) and Approval of the Law that provides measures to deal with it (Law 13,979 of 02/06/2020). Both measures taken in advance of the first confirmed Brazilian case (02/26/2020) and ready after WHO declared the state of Public Health Emergency of International Concern (01/30/2020).

Furthermore, the Brazilian Federal Government has also put in place the Intersetorial Crisis Committee in order to coordinate and monitor the impacts of COVID-19 in the country, led by the Chief of Staff of the Presidency of the Republic, with the active participation of the Minister of Health and other Ministries.

Border control. Restrictions on entry into Brazil for passengers on international flights from countries with high sustained community transmission.

Risk communication and community engagement

Activities to inform the public about what is known about COVID-19, what has been done, and what measures are being taken on a regular basis. Support for public feedback to respond promptly to misinformation and "rumors".

The Ministry of Health official website presents information on governmental actions to combat the pandemic aimed at both the general population and health managers and professionals.

For the general population, specific links about the disease were placed, such as “what you need to know” and “what to do”; fake news alerts and guidelines for safely resuming activities. There is also an open channel on WhatsApp application and a call center, Disque Saúde 136, which are open for the population questions.

For health professionals, there are links with information regarding management, diagnosis and treatment of COVID-19 cases; technical documents and epidemiological reports, the COVID-19 panel with updated data, in addition to a central toll free number ("136") for telemedicine support of health professionals, during business hours.

To health managers, in addition to the information mentioned above, there is "Localiza SUS" webpage (<https://localizasus.saude.gov.br/>), which also reports on the hiring and acquisition of inputs, equipment, HR and financial resources, among others, provided by the federal government to states and municipalities.

The Coronavirus SUS application was also made available for free on the IOS© and Android© platforms. Through participatory surveillance, the app allows citizens get to know about possible exposure, inserting laboratory results and having access to information about the disease, symptoms, transmission, forms of transmission, among others.

In addition, an epidemiological report is released daily in the late afternoon with national data including confirmed, new and accumulated cases and deaths and a press conference on weekdays.

Surveillance, rapid response teams, and case investigation

The Ministry of Health of Brazil has launched on January 22, 2020, the Centre of Emergence Operations in Public Health (COE-nCoV). The Centre aims to coordinate and prepare the public health response to the new coronavirus. Its structure allows data analysis to subsidize decision makers on the definition of adequate and opportune strategies and actions to fight public health emergencies.

The COE-nCoV is composed by senior technical experts Public Health Emergencies and field epidemiologists. Its organization integrates specialized teams in health surveillance, primary care, tertiary care, science and technology, logistics, infrastructure, communication, IT, defence, law enforcement, planning and budget, compliance and other relevant sector, bringing a whole-of-government approach.

To address the COVID-19 pandemic, the Ministry of Health's emergency response teams were trained in the areas of biosafety, management and surveillance of COVID-19, use of the “Go.Data” tool and technical meetings with international field epidemiology entities, like Tephinet. A repository for technical consultation was created based on the survey of scientific evidence and available publications.

A surveillance system was created for the Pediatric Multisystemic Inflammatory Syndrome (SIMP) associated with COVID-19 along with the implementation of an investigation form, information system and production of information notes.

The Contact COVID system (ContactTracing) was implemented along with a surveillance guide, investigation forms, information system and online training course. Data quality assessment of the information systems used to record COVID-19 cases was carried out in order to qualify and correct possible errors of entered data and producing a reliable database.

The MoH summarizes all the Brazilian official data related to the SAR-CoV2 infection nationally and organizes press conferences to give a transparent foresight of the pandemic evolution.

The Ministry of Health has also actively participated in field investigations, namely: (i) Cohort repatriated from China; (ii) Therapeutic itinerary of cases recovered and that evolved to death; (iii) Investigation on excessive home deaths attributable to COVID-19 in Amazonas State; and (iv) outbreaks of COVID-19 in one of the largest prison complexes in the country and in the female federal penitentiary.

These investigations generated several epidemiological studies (descriptive and analytical) that were disseminated in technical seminars, newsletters, technical reports, scientific articles and book chapters.

Points of entry

Efforts and resources at points of entry (POEs) should focus on supporting surveillance and risk communication activities.

Primary Health Care (PHC) is the gateway to the Unified Health System (SUS). During outbreaks and epidemics, PHC has a fundamental role in the

global response to the disease. PHC offers resolute care, playing the role of coordinating care at all levels, with great potential for early identification of serious cases that must be handled in specialized services.

In this context, the Brazilian Government published the Clinical Management Protocol with the objective to define the role of PHC services in the management and control of COVID-19 infection, as well as to provide clinical guidance instruments for professionals who work at the SUS, considering the context of community transmission of COVID -19 in Brazil.

For Brazil, it is essential that the PHC services work with a syndromic approach to the problem, focusing on the clinical approach of Influenza Syndrome and Severe Acute Respiratory Syndrome (SARS), regardless of the etiological agent.

National laboratories

Ensuring efficient operation of laboratories for large-scale testing on COVID-19.

WHO officially appointed the Laboratory for Respiratory Viruses and Measles of Fiocruz (Instituto Oswaldo Cruz) as a reference laboratory for combating the new coronavirus in the Americas. From now on, the Fiocruz laboratory, which was already a WHO reference for Influenza-like viruses, will be able to receive samples of COVID-19 from other countries in the Americas region, to carry out genetic sequencing, locate mutations and follow studies that may lead to the development of a vaccine and drug testing.

Experts from Fiocruz, the Ministry of Health of Brazil and the Pan American Health Organization (PAHO) provided training on laboratory diagnosis of the new coronavirus (2019-nCoV) targeting specialists from Argentina, Bolivia, Chile, Colombia, Ecuador, Panama, Paraguay, Peru and Uruguay.

Acquisition and distribution of up to 15 million COVID-19 tests to Federal States and municipalities (https://viz.saude.gov.br/extensions/DEMAS_C19Insumos_TESTES/DEMAS_C19Insumos_TESTES).

Adaptation of the applied practice of prevention and control of infections (inside and outside medical institutions)

Infection prevention and control (IPC) practices in communities and health facilities should be reviewed and enhanced to prepare for treatment of patients with COVID-19, and prevent transmission to staff, all patients/visitors and in the community).

The Ministry of Health of Brazil has published on its website extensive documents on the “Clinical Management and Treatment of COVID-19”, on the “Epidemiological Surveillance Guide”, the “Guidelines for the Diagnosis and Treatment of COVID-19”, among others (<https://coronavirus.saude.gov.br/manejo-clinico-e-tratamento>).

It includes all recommendation on infection prevention and control practices in communities. It also explains why health facilities should be reviewed and enhanced to prepare for treatment of patients with COVID-19, and prevent transmission to staff, all patients/visitors and in the community).

Also on the Website of the MoH, the following Training Videos are available to train health professionals (<https://coronavirus.saude.gov.br/profissional-gestor#capacitacao>):

- Clinical Management and Treatment at the Primary Health Care
- Clinical Management and Treatment at the Specialized Care
 - Correct use of PPE in emergencies and hospitals
 - Coronavirus Clinical Management Protocol (COVID-19) in the pre-hospital and hospital environment

- Coronavirus Clinical Management Protocol (COVID-19) in Intensive Care
- Mental Health Care
 - Mental health for special groups
 - Plan healthy routines and anticipate problems, keeping your mind healthy
 - Psychiatric Emergency in times of pandemic
 - Dealing with the patient who resists the medical approach in the Emergency Services
- General Orientations
 - SARS-CoV-2 Rapid Test
 - Mobilization of health professionals to confront COVID-19
 - “Farmácia Popular”: Important warning for those who use medicines from the popular pharmacy
 - Coronavirus: Symptoms, Tips and Recommendations
- Indigenous Health
 - Prevention and Role of Indigenous Health Agents (AIS) and Indigenous Sanitation Agents (AISAN) in Pandemic
 - Course: Prevention and Role of Indigenous Health Agents (AIS) and Indigenous Sanitation Agents (AISAN) in Pandemic
 - Indigenous Health Agents (AIS) and Indigenous Sanitation Agents (AISAN)

- In addition to actions at the national level, Brazil has been actively engaged in international efforts, such as the WHO “trial of solidarity” study and the “ACT Accelerator” initiative.

The MoH has also made investments in national Research and Development initiatives on COVID-19, especially its consequences, treatment, vaccines, diagnosis, pathogenesis and natural history of the disease, disease burden, health care and prevention and control.

Case management

Healthcare facilities should prepare for large increases in the number of suspected cases of COVID19. Staff should be familiar with the suspected COVID-19 case definition, and able to deliver the appropriate care pathway. Patients with, or at risk of, severe illness should be given priority over mild cases. A high volume of cases will put staff, facilities and supplies under pressure. Guidance should be made available on how to manage mild cases in self-isolation, when appropriate. Plans to provide business continuity and provision of other essential healthcare services should be reviewed. Special considerations and programmes should be implemented for vulnerable populations (elderly, patients with chronic diseases, pregnant and lactating women, and children).

The Ministry of Health of Brazil has published on its website extensive documents on the “Clinical Management and Treatment of COVID-19” (<https://coronavirus.saude.gov.br/manejo-clinico-e-tratamento>) including considerations for vulnerable populations:

- Epidemiological Surveillance Guide
- Guidelines for the Diagnosis and Treatment of COVID-19
- Covid-19 clinical management protocol in Specialized Care
- Flow of clinical management of pregnant women in Specialized Care

- Flow of clinical management of adults and elderly in Specialized Care
- Flow of pediatric clinical management in Specialized Care
- Flow of clinical management in Primary Health Care in community transmission
- Body management in the context of the new COVID-19 coronavirus

Guidance on self isolation is also available on the MoH Website, which provides recommendation if someone feels sick, with flu-like symptoms. The indication is that this person avoids physical contact with other people, especially the elderly and the chronically ill, and stay at home for 14 days. The MoH only recommends that an individual seeks hospital care as soon as one feels Covid-19 symptoms. The guidelines of self isolation recommend all the necessary care for individuals who live alone, or with other people.

Logistics support for operational measures

Logistical arrangements to support incident management and operations should be reviewed. Expedited procedures may be required in key areas (e.g. surge staff deployments, procurement of essential supplies, staff payments).

Central monitoring of procurement and distribution of essential medical supplies:

In order to guarantee equitable and proportional allocation of health resources, the Ministry of Health is conducting a central monitoring of bed occupancy rates and installation of new hospital beds, in both public and private hospitals, in order to coordinate the supply of PPE, laboratory tests (molecular and serological), mechanical respirators, workforce, logistics and communication. This coordination is executed in partnership with Municipalities and States Councils.

Logistics of strategic health inputs (<https://localizasus.saude.gov.br/>):

- Map of Brazil with the availability of strategic health inputs: alcohol gel, apron, quick test kit, glove, surgical mask, N-95 mask, shoes and hospital cap, fast dose vaccination, goggles, rented beds, adult ITU beds (public and private)
- Graphics and figures related to strategic health inputs and hospital beds

The MoH has created the Strategic Action “Program Brazil with me – Health Professionals”, to face the public health emergency arising from Covid-19 and will last as long as the state of emergency of public health remain (https://viz.saude.gov.br/extensions/DEMÁS_C19Insumos_RH/DEMÁS_C19Insumos_RH.htm).

The Ministry of Health has registered more than one million health professionals who will be able to work in the whole country in the fight against the coronavirus. The reinforcement is to assist the managers of the Unified Health System (SUS) in facing the Covid-19 through the work capacity of these professionals. Professionals from 14 health areas will be registered and trained in the clinical protocols of the disease.

Any other relevant information

DEVELOPMENT OF VACCINES AND MEDICINES

Brazil believes new technologies, especially COVID-19 medicines and vaccines must be seen as global public goods. In this sense, Brazil is open to international partnerships and has engaged in major multilateral initiatives. On medicines, Brazil participates in clinical trials conducted under the Solidarity Study, coordinated by WHO. Regarding vaccines, Brazil joined the ACT Accelerator platform and has joined the COVAX Facility mechanism, part of the ACT vaccine pillar.

In addition, the country participates in Phase 3 of clinical trials for the development of a vaccine for the new coronavirus, in partnership with the laboratory AstraZeneca and the Oxford University.

Regarding national vaccine R&D initiatives, Brazil is involved within six initiatives: two vaccines from the University of São Paulo; two vaccines from Bio-Manguinhos / Fiocruz; one from Fiocruz-Minas in partnership with the National Institute of Science and Technology in Vaccines (INCTV); and one from Butantan Institute.

Brazil has a robust industrial park of immunobiologicals, with special emphasis on BioManguinhos, from the Oswaldo Cruz Foundation, associated with the structure of the Ministry of Health. This fact empowers Brazil to occupy a prominent position in the region due to its wide productive capacity of inputs health, which represents a valuable opportunity for the establishment of international cooperation.

ECONOMIC RESOURCES

Since the beginning of the pandemic, the Ministry of Health has allocated around US\$ 16.8 billion to the 26 states and the Federal District, of which US\$ 11.7 billion were for routine services of the Brazilian Unified Health System (SUS), and another US\$ 5.2 billion exclusively for actions to counter the Covid-19.

The purchase of PPE and other health inputs usually is under the responsibility of the states and municipalities. However, due to the global scarcity of these materials in the current public health emergency scenario, the Ministry of Health used its purchasing power in order support local managers and to strengthen the national health system.

BEDS

The Ministry of Health has already enabled 13,288 ICU beds requested by states and municipalities for the exclusive treatment of Covid-19 patients - which represents almost 100% of the demand. Of this total, 247 are from pediatric ICUs. The amount invested by the Federal Government is US\$ 380 million for states and municipalities to pay for these units for the next 90 days - or as long as there is a need accordingly to the pandemic. In addition, the qualifications of 4,758 ICU beds were extended for more than 30 days, at a cost of US\$ 45.6 million, meeting the demands of the states and municipalities.

In addition to the ICU beds, the Ministry of Health enabled 698 exclusive ventilatory support beds for Covid-19, with an investment of US\$ 2 million. These beds serve patients with Covid-19 who do not need an Intensive Care Unit. This is also based on a request from the states and municipalities.

Although states and municipalities have the autonomy to create and provide the necessary beds, the Ministry of Health, as a result of the current emergency scenario, has supported the state and municipal departments and invested in actions, services and infrastructure to face the disease.

PULMONARY FANS

As part of the Federal Government's strategic support in serving the states, Brazil now counts on the reinforcement of 10,857 pulmonary ventilators, 5,580 for ICUs and 5,277 for transport delivered by the Ministry of Health to assist in the care of patients with Covid-19.

Distribution to municipalities and health units is the responsibility of each state, according to local planning. Deliveries take into account the installed capacity of the public health care network - especially in places where transmission is taking place at a higher speed.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

The Ministry of Health distributed 255.4 million Personal Protective Equipment to ensure the protection of health professionals who work on the front line of the countering the Covid-19 across the country. Among the items are masks, aprons, glasses, face shields, caps, sneakers, gloves and alcohol.

In total, the Ministry of Health has delivered to the states 564,300 liters of alcohol; 3.1 million aprons; 36.9 million gloves; 18.2 million N95 masks; 176.8 million surgical masks; 2.3 million glasses and face shields, and 17.2 million caps and sneakers. The materials were delivered to the state health departments, responsible for defining which services will receive them, based on local planning.

With the gradual normalization of markets, the expectation is that local managers will again be able to supply their stocks.

COMMUNITY CENTERS

To strengthen SUS strategies in poor setting communities, the Ministry of Health attended and accredited 91 Community Centers to attend the COVID-19 numbers as well as to maintain the care demand that is usual in Primary Health Care (PHC), with an investment of around US\$ 5 million.

In addition, there is a proposal of the Health Care Network (RAS), to attend to mild cases of flu and Covid-19 syndrome in the Community Centers and forwarding serious cases to the urgency and emergency network or hospital network. The objective is to reduce the circulation of people with mild symptoms in other health services. So far, 3 266 Call Centers for Coping with Covid-19 have been accredited, with an investment of US\$ 166.7 million.

INDIGENOUS PEOPLE

The Ministry of Health, through its Special Secretariat for Indigenous Health (SESAI), has been developing continuous strategies for the protection, prevention, diagnosis and treatment of Covid19, in addition to intensifying the distribution of provisions, supplies, rapid tests and protective equipment to the 34 Special Indigenous Health Districts (DSEIs). In order to offer quick assistance in emergencies, SESAI hired 262 professionals to compose Rapid Response Teams (ERR), reinforcing the work of more than 14 thousand health professionals of the Multidisciplinary Indigenous Health Teams.

In addition, structural improvement initiatives in the villages are also underway, such as the expansion of water and sanitation networks.

THE RUSSIAN FEDERATION



Country-level coordination, planning, and monitoring

As part of measures to eliminate the spread of the novel coronavirus infection COVID-19 in the Russian Federation, a well-established system of measures to detect and prevent COVID-19 prevented the explosive development of the epidemic in Russia. We were ahead of the curve, relying not only on research and recommendations from Russian experts, but also on international experience.

Our country has come to the beginning of the pandemic with important advantages:

- a functioning and inventoried network of infectious diseases hospitals and departments with specialized beds and trained and equipped personnel;
- the sanitary and epidemiological service, which acted as a shield against the spread of infection;

- a system of compulsory health insurance that guarantees payment for medical care to all those who need it, allowing all citizens to seek medical care as early as possible, without thinking about the financial component.

All these components proved to be very important in the first stages, becoming a support for resource mobilization in the future.

In January 2020, in response to an outbreak of the novel coronavirus infection COVID-19 by the Russian Federation Government has established an interdepartmental working groups high-level operational decisions as to the administration of the President of the Russian Federation and the Government of the Russian Federation.

In January, a national plan was adopted to prevent the importation and spread of the novel coronavirus infection COVID-19 on the territory of the Russian Federation, and the infection itself was added to the national list of diseases that pose a danger to others.

At the same time, the Ministry of health created a three-level model for responding to the threat – the operational Headquarters under the Ministry, the Headquarters' working groups, and Federal remote centers for counseling severe patients with COVID-19.

The basis for making management decisions was the Federal register for COVID-19, an information resource for recording information on morbidity, which promptly includes information about cases of diseases, treatment and patient outcomes.

The first two cases of COVID-19 were detected in Russia on January 31, 2020 and turned out to be imported.

A set of measures aimed at mobilizing the healthcare system has been adopted, unified approaches to the diagnosis and treatment of patients have been developed, and a new regulatory environment has been created for promising drugs, test systems, and personal protective equipment.

In addition to sanitary and anti-epidemic measures, the introduced social distancing measures helped to reverse the situation. The President of the Russian Federation, taking into account the analysis of the epidemiological situation of the spread of the epidemic in foreign countries, declared a period of

non-working days on March 25, which lasted a total of 6 weeks. During this period, the movement restriction regime was applied. Special information systems were also created to track contacts and sick patients, and unprecedented social support measures were created.

During the period of non-working days, the rate of daily increase in detected cases decreased by 27 times, and the second-the proportion of moderate and severe forms of infection decreased by 1.5 times.

Currently, more than 1.8 million people are ill in the Russian Federation.

The General epidemic situation in the country is complicated by the beginning of the spread of seasonal acute respiratory viral infections and influenza.

Risk communication and community engagement

The Ministry of Health of the Russian Federation carried out work to inform citizens of the Russian Federation about coronavirus infection, preventive measures and reduce the risks of spread in the official offices of the Ministry of Health of Russia on social networks: VKontakte, Odnoklassniki, Facebook and Instagram.

On social networks, the Russian Ministry of Health launched a flash mob #DefenceOtKorona, which was supported by the leaders of public opinion Edgard and Askold Zapashny, Evgeny Petrosyan, Andrei Burkovsky. The essence of the flash mob was to call on the citizens of the Russian Federation to adhere to the rules of personal hygiene and observe preventive measures during the spread of a new coronavirus infection.

A special section dedicated to the topic of coronavirus has been created on the official website of the Ministry of Health of the Russian Federation, for prompt notification, publication of statistical data and clinical recommendations.

Onco-life.ru, the official portal of the Ministry of Health of the Russian Federation for the fight against oncological diseases, has developed and operated a special thematic subsection, which contains materials devoted to the regulatory, organizational and psychological aspects of the behavior of patients with cancer in the current difficult epidemiological situation.

On the official Internet portal of the Ministry of Health of Russia takzdorovo.ru, dedicated to a healthy lifestyle, there is a virtual assistant "Zozhik" who answers questions about the new coronavirus infection.

On 4-th September 2020 The Ministry of Health of Russian Federation launched an interactive service in the WhatsApp messenger that provides information verified by leading experts in the field of health protection, and the necessary instructions from the Ministry of Health of Russia on measures to prevent and reduce the risks of the spread of COVID-19.

We also inform you that on the basis of the consultative telephone center of the St. Petersburg Research Institute of Phthisiopulmonology of the Ministry of Health of the Russian Federation, there is a 24-hour hot line 8 800 200 0 200, which from 03.02.2020, in connection with the emergence of a new coronavirus infection, advises citizens on issues related to this disease.

From 21.03.2020 on the basis of the Department of Emergency Psychiatric and Psychological Aid of the Federal State Budgetary Institution "NMITs PN im. V.P. The Serbian Ministry of Health of Russia has a hotline 8 495 637 70 70 on issues related to COVID-19. Hotline consultants provide psychological support to people who are anxious about the current epidemiological situation.

From 27.03.2020, on the basis of the Federal State Budgetary Institution "NMITs of Radiology" of the Ministry of Health of Russia, a hotline was created 8-800-444-31-02 for cancer patients on COVID-19 issues.

Points of entry

In this regard, sanitary and epidemiological control at checkpoints was strengthened, and then a decision was made to temporarily suspend the passage through the state border of the Russian Federation. Russia was almost the first in the world who did this to protect people and buy time to prepare the health system to receive patients.

National laboratories

Russian specialists were among the first in the world to create effective test systems. The national testing strategy has been implemented, and more than 62.9 million tests have been completed so far. More than 900 laboratory complexes are involved in testing. We have registered more than 190 test

systems for detection by polymerase chain reaction of the COVID-19, including the development and production of test systems for detecting class M and G immunoglobulin, as well as the development and production of test systems that detect specific immunoglobulin. These test systems are also determined in a quantitative way and allow us to use the plasma of sick donors to form drugs for the treatment of COVID-19.

It should be noted that the entire amount of medical care, including testing and treatment, is covered by the state insurance system. All assistance is provided to the population free of charge. We continue to provide emergency and planned care in full. Only some diseases required postponing planned hospitalization for several months, but today work in hospital facilities has been restored.

Adaptation of the applied practice of prevention and control of infections (inside and outside medical institutions)

In order to mobilize the health system during the epidemic, the following measures were taken:

Regulatory documents have been developed regarding the organization of medical care throughout the country, including the requirements of the Ministry of health of the Russian Federation for the implementation of medical activities aimed at the prevention, diagnosis and treatment of the new covid-19 coronavirus infection, including requirements for equipping a structural unit of a medical organization for the treatment of COVID-19.

At the same time, medical specialists were trained (remotely) and almost 1.5 million medical specialists were trained to provide medical care to patients with a new coronavirus infection.

Temporary guidelines for medical personnel for the prevention, diagnosis and treatment of coronavirus infection have been developed. Recommendations are updated on a regular basis, and the 9th edition of the document has been published. Educational programs, guidelines, and legal documents were open to foreign colleagues who actively used them in their work.

The situation required us to allocate more than 310 billion rubles for the purchase of medical equipment, re-profiling of the country's bed Fund, payments to doctors, and support for regional systems. More than 250 thousand infectious

diseases beds were deployed, necessary equipment and personal protective equipment were purchased. More than 30 thousand beds are provided with intensive care facilities, including ventilators. There was also no shortage of resuscitation equipment.

In addition, the Government of the Russian Federation has taken the necessary decisions to ensure that outpatient treatment of patients with coronavirus is implemented to the required extent. Additional funds were allocated for testing for coronavirus (in the amount of 1.0 billion rubles), as well as for providing medicines to patients undergoing outpatient treatment (in the amount of 5.1 billion rubles).

As in any country in the world, we are faced with a shortage at the initial stage of a number of medicines and medical devices. In two months, there was a twofold increase in registered medical devices for personal protection.

A new regulatory mechanism has been created to accelerate the introduction of medicines for the prevention and treatment of new coronavirus infection. We have developed drugs – Favipiravir (full cycle of synthesis), today these drugs are available, but are used under close supervision.

An Interleukin-6 inhibitor has also been developed and registered for the prevention and treatment of cytokine storm. In the Russian Federation, there is also a sufficient amount of both antibacterial drugs and drugs for the prevention of thrombosis.

Today, 2 domestic vaccines "Sputnik-V" and "EpiVaccorona" are registered. Vaccines use different technologies, so they will be produced at different production facilities without creating competition with each other. We will receive more doses of all types of vaccines at the same time, if they are registered. The first "Sputnik-V" vaccine has already appeared in all regions of the country, and vaccination of citizens, including medical workers, has begun.

One more vaccine is on the final stages. On September 21, 2020, a permit was issued to conduct clinical trials of a vaccine developed by the M.P. Chumakov Federal research center of the Russian Academy of Sciences. Clinical trials of this vaccine started on October 6, 2020.

Logistics support for operational measures

In order to deal with the threat of the spread of the novel coronavirus infection COVID-19 issued an order of Ministry of health of Russia from March 19, 2020 No. 198H (with subsequent amendments and additions), which reflects the sequence of actions of medical workers, providing care in the outpatient setting, including at home, patients with acute respiratory viral infections, including sample cases, and tactics; the algorithm of actions of medical workers, providing medical aid in stationary conditions, including specific activities and timelines; activities carried out by the health workers to prevent nosocomial spread of the novel coronavirus infection COVID-19 in a medical organization providing medical aid in stationary conditions, as well as the rules of the organization, additional training of health workers to implement prevention measures and reduce the risks of spread of the novel coronavirus infection COVID-19 (hereinafter – the rules).

Information materials and interactive educational modules on topical issues of the novel coronavirus infection COVID-19 are available on the Portal of continuing medical and pharmaceutical education of the Ministry of Health of the Russian Federation.

The Portal contains information materials and modules that are mandatory for all medical workers to master, as well as mandatory for medical workers to master in accordance with the profile of medical care provided and taking into account the specifics of the work functions performed by a medical worker.

According to the rules, the heads of medical organizations are responsible for informing medical workers about the need to master information materials and interactive educational modules on topical issues of the novel coronavirus infection COVID-19 and organizing the development of information materials and modules by medical workers.

Order No. 327n of the Ministry of Health of the Russian Federation dated April 14, 2020 approved the cases and conditions under which individuals can be allowed to carry out medical activities and (or) pharmaceutical activities without a specialist certificate or certificate of accreditation of a specialist and (or) in specialties that are not provided for by the certificate or certificate of accreditation of a specialist. This document simplifies the admission of medical

workers to professional activities in the face of the threat of the spread of the novel coronavirus infection COVID-19, which makes it possible to provide additional hiring of medical workers in the case of an emergency and (or) in the case of a threat of the spread of a disease that is dangerous to others.

THE REPUBLIC OF INDIA



Country-level coordination, planning, and monitoring

National public health emergency management mechanisms should be activated with engagement of relevant ministries such as health, education, travel and tourism, public works, environment, social protection, and agriculture, to provide coordinated management of COVID-19 preparedness and response. NAPHS and PIPPs, if available, should also be adapted to address COVID-19.

Government of India has followed a ‘Whole of Government’ and ‘Whole of Society’ approach for managing COVID-19 pandemic in the country. A High level Group of Ministers (GoM) was constituted on 3rd February, 2020 to review, monitor and evaluate the preparedness and response measures being taken regarding management of COVID-19 in the country with Ministries of Health & Family Welfare, Civil Aviation, External Affairs, Home Affairs, Shipping, Chemicals and Fertilizers. Under the Disaster Management Act, 2005,

high level inter-ministerial "Empowered Groups" were created to fast track evidence-based decision on different aspects of COVID-19 management in the country. In addition, a Committee of Secretaries under Cabinet Secretary is also monitoring and reviewing public health response to COVID-19.

The Government has worked with non-Governmental, inter-Governmental and private sector in unison.

Risk communication and community engagement

Activities to inform the public about what is known about COVID-19, what has been done, and what measures are being taken on a regular basis. Support for public feedback to respond promptly to misinformation and "rumors".

Considering the criticality of need for raising community awareness on preventive health measures against COVID-19 and reinforcing people's trust in Government's response to COVID-19, Government of India maintained an open, transparent, and bi-directional policy towards risk communication for COVID. A few examples are:

1. An Empowered Group has been tasked to oversee all COVID-19 related communications.
2. Information on cases, deaths, recoveries, tests conducted were are being made available on daily basis on Ministry of Health & Family Welfare's website. In addition all advisories/guidelines/SOPs issued were made public on the website of Ministry of Health & Family Welfare.
3. TV Commercials and radio spots are being broadcasted (National and Regional channels). Social media is aggressively being leveraged. Caller tune messages are being utilized to deliver key messages across 117.2 crore mobile telephone connections.
4. Several audio videos, informative guidebooks on Covid Appropriate Behaviours and anti-stigma, and social media creatives were developed and

uploaded on MoHFW's website, social media handles and amplified through State Government network.

5. Media, community radio, youth, volunteer and community health worker networks are being leveraged to take the critical message of anti-stigma and now COVID Appropriate Behaviors (i.e. mask wearing, physical distance, hand hygiene and not spitting in public places) down to the last mile.

6. A dedicated call centre / helpline (1075) has been started to guide community at large which are being used by the citizens very effectively and on a regular basis.

7. Capacity building on anti-stigma messages, and COVID Appropriate Behaviors was undertaken for – National Helpline staff, State Helpline Staff, Radio Jockeys (National and State), Youth Networks, SHGs, and Community Based Organizations

8. Stigma and Discrimination and COVID Appropriate Behavior messages are being amplified across 12 lakh ASHAs and ANMs via pre-recorded phone messages

9. Hon'ble PM has launched 'Jan Andolan' for COVID-19 Appropriate Behaviour on 8th October 2020 in view of the upcoming festivals and winter season as well as the opening up of the economy with the aim to encourage People's Participation with the key message of 'Wear Mask, Follow Physical Distancing, Maintain Hand Hygiene'.

For countering circulation of misinformation on COVID-19, Press Information Bureau's Factcheck unit works to bust rumours getting viral on the social media. 'PIBFactCheck' is a verified handle on Twitter that continuously monitors trending messages on social media platforms and conducts comprehensive review of its contents to bust fake news. Any person can submit to

PIBFactCheck any social media message, including text, audio and video, to verification of its authenticity.

Surveillance, rapid response teams, and case investigation

1. Integrated Disease Surveillance Programme (IDSP) had issued advisory to all States/UTs on in January itself for ILI/SARI surveillance to pick up any travel related case reported in the community and follow up contacts of suspect/confirmed cases.
2. Community surveillance was initiated initially for travel related cases and subsequently for clusters of cases being reported. Rapid Response Teams at National, State and District levels were trained on COVID-19 outbreak investigation and mounting public health response for the same.
3. Surveillance guidelines, including surveillance case definitions, guidelines on contact tracing were issued and widely disseminated. These were updated as per evolving knowledge about the disease and its transmission.
4. Ministry of Health & Family Welfare released containment plans to contain cluster and large outbreaks on 2nd March and 4th April 2020 respectively and these plans were updated from time to time.
5. The containment plans envisage a strategy of breaking the chain of transmission by (i) defining containment and buffer zones, (ii) applying strict perimeter control, (iii) intensive active house to house search for cases and contacts, (iv) isolation and testing of suspect cases and high risk contacts, (v) quarantine of high risk contacts, (vi) intensive risk communication to raise community awareness on simple preventive measures and need for prompt treatment seeking and (vii) strengthening of passive ILI/SARI surveillance in containment and buffer zones.

During house to house surveillance elderly and other high-risk population (in particular those with co-morbidities) are identified and followed up. In high

density populations like urban settlements, such high-risk population were moved out of such settlements into quarantine facilities.

Points of entry

Efforts and resources at points of entry (POEs) should focus on supporting surveillance and risk communication activities.

1. Thermal screening has been initiated with effect from 18th January, 2020 at the international airports of Delhi, Mumbai and Kolkata which has now been extended to 30 airports.
2. Universal Screening of passengers was over a period of time undertaken for passengers from all countries. Till 23rd March 2020 (till suspension of all commercial flights), a total of 14,154 flights with 15,24,266 passengers have been screened at these airports.
3. Multi-disciplinary Central teams were tasked with inspection of airports and hospitals attached to them to ensure proper screening and end-end management of suspect cases detected on screening.
4. In addition to airports, screening is also being done at 12 major and 65 minor sea ports.
5. Screening activities are also being undertaken at land border crossings.
6. Information is being provided to international travelers using in-flight announcements on all flights, use of strategically placed signages at the airports.
7. All passengers are to fill the health declaration form.
8. With the aim to bring home stranded Indians in many countries due to Covid-19 pandemic Govt. of India initiated Vande Bharat Mission on May 7th 2020. Temporary air travel arrangements (Transport Bubbles) between India and 9 other mutually consenting countries aimed at restarting commercial passenger services have commenced. They are reciprocal in nature, meaning airlines from

both countries enjoy similar benefits. As on 9th November, 2020, a total of 21,55,522 passengers and crew members have been screened at the airports. Of these 1376 have been referred for isolation.

National laboratories

Ensuring efficient operation of laboratories for large-scale testing on COVID-19.

1. Starting with just one laboratory for testing of samples for COVID-19, the network of existing laboratories has been expanded vastly to test samples for COVID-19. As on 9th November 2020, total operational (initiated independent testing) government laboratory reporting to ICMR is 1142. In addition, 938 Private Laboratories have been approved for COVID-19 Testing.

2. ICMR has undertaken a detailed exercise to upgrade diagnostic capacity development in the country. As on 9th November 2020, 296 RT-PCR kits (incl. those from indigenous manufacturers) have been evaluated by ICMR, of which 137 have been validated for use. Similarly, for antigen testing, as on 6th November 2020, 42 Antigen based Rapid TestKits have been validated (including 6 revalidated Kits) of which 11 have been found satisfactory. For serological testing, as on 3rd November 2020, 27 manufacturers of IgG ELISA/CLIA KITS have been validated.

3. Adequate numbers of testing kits are available and the same is being monitored by ICMR.

4. RT-PCR test recommended by ICMR is considered the Gold Standard for diagnosis of COVID-19. In addition, rapid antigen test has been introduced as point of care test. Those found positive by this test are considered as 'true positives'. Those symptomatic found negative should be sequentially tested by RT-PCR.

5. Besides the Gold Standard RT-PCR (in 1112 labs), TrueNat (in 840 labs) and CBNAAT (in 128 labs) techniques are also being used for testing. In addition, Rapid Antigen testing is being utilized for point of care testing.

6. As on 9th November 2020, a total of 11,96,15,857 COVID-19 tests have been conducted in the country. India is now testing more than a million samples a day, which is almost 5 times the WHO recommendation of 142 tests/ million population/day.

Adaptation of the applied practice of prevention and control of infections (inside and outside medical institutions).

Infection prevention and control (IPC) practices in communities and health facilities should be reviewed and enhanced to prepare for treatment of patients with COVID-19, and prevent transmission to staff, all patients/visitors and in the community).

Realizing the need to protect workforce against acquiring COVID-19 infection, Ministry of Health and Family Welfare initiated steps ensuring adherence to infection prevention and control (IPC) protocols.

1. A comprehensive guideline on Infection Prevention and Control practices in healthcare settings was released in January itself.
2. A National level training covering the same was conducted for all the States in the month of March 2020. A training plan was also conveyed to States to complete training up to district level by 20th March 2020.
3. Training on Infection Prevention and Control has also made available for all category of healthcare workers on the iGoT platform.
4. States have been asked to constitute Infection Prevention and Control committees. Hospitals were also to identify a nodal officer who will monitor the healthcare workers and review their exposure status. High risk exposures are placed under quarantine for 7 days. Based on their exposure/clinical profile such doctors, nursing officers and other health workers, a decision shall be taken by

the Nodal Officer/Head of the Department (or his appointed Sub-committee) for further period of one week. An advisory for managing health care workers working in COVID and Non-COVID areas of the hospital was issued by Ministry of Health and Family Welfare on 18th June, 2020.

5. Guidelines on rational use of PPEs for hospital and community settings (including front line workers) were issued on 24.03.2020. These guidelines followed a risk-based approach and recommended type of PPE that needs to be used in high and low risk areas.

6. The healthcare workers are provided with hydroxychloroquine for prophylaxis and prevention of infection.

7. The States/UTs and Central Government Institutions have been supplied with PPEs, N-95 masks, etc. to ensure adherence to IPC protocols.

Case management

Healthcare facilities should prepare for large increases in the number of suspected cases of COVID-19. Staff should be familiar with the suspected COVID-19 case definition, and able to deliver the appropriate care pathway. Patients with, or at risk of, severe illness should be given priority over mild cases. A high volume of cases will put staff, facilities and supplies under pressure. Guidance should be made available on how to manage mild cases in self-isolation, when appropriate. Plans to provide business continuity and provision of other essential healthcare services should be reviewed. Special considerations and programmes should be implemented for vulnerable populations (elderly, patients with chronic diseases, pregnant and lactating women, and children).

1. For appropriate management of COVID-19 cases, to minimize the risk of cross infection and also to ensure availability of hospital services for non-COVID needs, Government of India advised State governments to setup a three-tier arrangement of health facilities exclusively for COVID. These are:

- (i) COVID Care Center with isolation beds for mild or pre- symptomatic cases;
- (ii) Dedicated COVID Health Centre (DCHC) with oxygen supported isolation beds for moderate cases and mild cases with high risk factors
- (iii) Dedicated COVID Hospital (DCH) with ICU beds for severe cases.

These DCHCs or DCH may be a full hospital or a separate block in a hospital with preferably separate entry/exit/zoning.

2. In addition, we have the capacity to set up large dedicated COVID-19 field hospitals with capacities ranging from 1000 to 10,000 isolation beds.

3. Hospital infrastructure in the country for managing COVID-19 cases is being continuously monitored by Government of India. States have been advised to prepare for requisite surge capacities to manage cases, in accordance with existing and projected growth rates.

States/UTs are being provided required technical and logistic assistance for managing the COVID-19 public health challenge in terms of clinical management protocols, supply of drugs, oxygen, ventilators, etc.

Logistics support for operational measures.

Logistical arrangements to support incident management and operations should be reviewed. Expedited procedures may be required in key areas (e.g. surge staff deployments, procurement of essential supplies, staff payments).

1. At the onset of COVID pandemic, there were no indigenous manufacturers of PPEs with requisite standards. This capacity was up-scaled with involvement of Ministry of Textiles, Department of pharmaceuticals, CDSCCO, Ministry of Consumer Affairs, DGFT, NPPA and multipronged strategy of promoting indigenous manufacturers and ensuring market availability.

2. More than 1100 domestic manufacturers of PPE coveralls have cleared quality test. Orders for over 1.62 crores PPE have been placed by HLL to nearly

109 manufacturers. Successful efforts were made in conjunction with Ministry of External Affairs to order PPE Kits from abroad. Orders for 30 lakh PPEs were placed on foreign sources. Total orders for 1.92 crore PPEs have been placed by the Central Government so far. More than 100 Licenses were issued by BIS for manufacturing of FFP2/N-95 with manufacturing capacity of more than 25 lakhs per day. Orders were placed for 4.67 crore N-95 masks.

3. Ministry of Health & Family Welfare has already supplied 1.53 Crore PPE Kits and 3.6 crore N-95 masks to States.

4. Additionally, procurement was initiated for ventilators, drugs (hydroxychloroquine). Till date 36,825 ventilators have been allocated to States of which 31,712 have been delivered.

Ministry of Health and Family Welfare, Government of India is closely monitoring the availability and supply of Medical Oxygen and necessary infrastructure available with respective State/UT for management of COVID-19 effectively. MoHFW has delivered 1,02,400 Medical Oxygen Cylinders to States/UTs. State/UTs have been advised to utilize funds available under Emergency COVID Response and Health System Preparedness Package for procuring additional oxygen cylinders, if required. National Pharmaceutical Pricing Authority (NPPA) has issued instruction of fixing the price of Liquid Medical Oxygen, while prices were already fixed for gaseous Medical Oxygen.

THE PEOPLE'S REPUBLIC OF CHINA



Country-level coordination, planning, and monitoring

National public health emergency management mechanisms should be activated with engagement of relevant ministries such as health, education, travel and tourism, public works, environment, social protection, and agriculture, to provide coordinated management of COVID-19 preparedness and response. NAPHS and PIPPs, if available, should also be adapted to address COVID-19.

Best practice: a the unified leadership and a efficient command system.

Case Study: Since the outbreak of COVID-19 began, the Chinese government has attached great importance to the life and health of its people. To comprehensively strengthen unified leadership and command over the prevention and control of the epidemic throughout the country, the CPC central committee has set up the Central Leading Group for COVID-19 Prevention and Control and dispatched the Central Steering Group to Hubei province, the

epicenter of the outbreak. The State Council has established the Joint Prevention and Control Mechanism while at provincial, municipal and county levels, an emergency command mechanism has been set up under the leadership of the party and government. In accordance with the general requirements of "with firm confidence and solidarity, taking precise science-based prevention and control measures", China has taken the unprecedented robust and aggressive measures in fighting against the epidemic. China has deepened international exchanges and cooperation to build a health community with a shared future for mankind.

Risk communication and community engagement

Activities to inform the public about what is known about COVID-19, what has been done, and what measures are being taken on a regular basis. Support for public feedback to respond promptly to misinformation and "rumors".

Best practice: The Joint Prevention and Control Mechanism of the State Council establishes a system of daily press conference, strengthening the publicity to medical personnel and the public through various media.

Case Study: The official Chinese and English websites of the National Health Commission timely released the latest progress of epidemic information and prevention and control work across the country. From January 27, 2020, the National Health Commission and relevant departments hold daily press conferences to release authoritative information in a timely manner, covering epidemic prevention and control, medical treatment, scientific research and other fields. As of April 30, a total of 95 press conferences were held. The official website of the National Health Commission and the new media platform of "Healthy China" have set up a health science column, produced popular science materials for different groups of people, and maximized the coverage of health knowledge through traditional and new media, guiding the public in scientific prevention and control.

Surveillance, rapid response teams, and case investigation

Best practice: China has developed law-based, science-driven and precise prevention and control strategies.

Case Study: The State Council of China has timely included COVID-19 in category B of Infectious Diseases, but treated it as those in category A. All provinces have timely launched and adjusted their emergency response mechanisms and set up four lines of defense. The first line is to win the battle in Wuhan and Hubei province by “preventing local transmission and export of cases” The second line is to prevent a major outbreak in Beijing by resolutely cutting off the source of imported infections. The third line is to stop the spread of the disease in Hubei’s surrounding areas. Hubei has established a joint prevention and control mechanism with six neighboring provinces to effectively prevent the spread of the epidemic. And the fourth is to resolutely contain the spread of the epidemic nationwide.

China emphasizes the approach of taking early precautions and mobilizing the grassroots to building a tight defense line with the general public. With a principle of early detection, early reporting, early isolation, and early treatment, China has revised the prevention and control protocol for six times and implemented various containment measures. China has issued 15 technical guidelines which focus on vulnerable groups such as the elderly and children and key places like stations, shopping malls, businesses and schools where primary responsibilities are assumed. China has adopted more targeted prevention and control measures to ensure the orderly return to work and resume production. While maintaining containment measures within the country, China has further strengthened the control of imported cases from abroad to prevent their sustained spread.

Points of entry

Efforts and resources at points of entry (POEs) should focus on supporting surveillance and risk communication activities.

To contain to spread of COVID-19, the General Administration of Customs of the People's Republic of China (GACC) has adopted strict prevention and control measures at ports of entry where all inbound personnel are required to complete health declarations and pass temperature screenings and medical inspections. And in order to further observe the principles of early detection, reporting, quarantine and treatment of COVID-19 patients, health inspectors would conduct health screenings and laboratory tests to all travelers as part of the epidemiological process. Suspected or confirmed COVID-19 patients, travelers who had contact with confirmed cases or direct exposure to potential source of infection, and those with fever or respiratory symptoms should be placed under medical observation. Transfer of such patients and disclosure of relevant information should be properly managed during the process.

National laboratories

Ensuring efficient operation of laboratories for large-scale testing on COVID-19.

We have taken measures to guide the local medical and health institutions to continuously strengthen their capability of nucleic acid testing. First, we have facilitated laboratory construction. By the end of September 2020, China's top-level general hospitals, specialized hospitals for infectious diseases, disease control institutions at all levels and at least one hospital within a county have the capability to sample and test nucleic acids. By the end of 2020, all secondary general hospitals will have accounting sampling and testing capabilities. Second, we have built the urban nucleic acid testing bases. The standard for urban testing base is building one base for every 1 million permanent residents. Relying on the top-level general hospitals, each base's testing capacity has reached 10,000 copies per day. Third, we have organized mobile testing task force. There are 100 public testing laboratories across China, equipped with

mobile LABS and relevant auxiliary mobile facilities. Each public testing laboratory has a maneuvering testing capacity of 10,000 copies per day. We also support the development of the third-party testing laboratories in accordance with laws and regulations. Fourth, we have established the hotspot support system. In case of a local epidemic, the nucleic acid test could be completed within 5 to 7 days by dispatching the mobile testing force. In addition, we have carried out technical research, popularized the 5:1 and 10:1 mixed sampling detection technology in practice, strengthened quality control, and constantly improved the efficiency of nucleic acid detection.

Adaptation of the applied practice of prevention and control of infections (inside and outside medical institutions)

Infection prevention and control (IPC) practices in communities and health facilities should be reviewed and enhanced to prepare for treatment of patients with COVID-19, and prevent transmission to staff, all patients/visitors and in the community).

First, we have strengthened the management of patients' admission to hospital. We have developed the procedure of patient admission screening. To reduce the potential risk of nosocomial cross-infection, transition (buffer) wards can be set up when conditions permit. Second, we have strengthened ward management. Medical institutions are encouraged to implement video visits, strictly limit the number and time of personnel who must accompany or visit, and do a good job in personal protection, temperature detection, health status and information registration. Third, we have required strict implementation of the standard prevention provisions. Medical institutions are required to strengthen ventilation management, cleaning, disinfection and disposal of the diagnosis and treatment environment. Medical personnel shall do a good job in personal protection.

Case management

Healthcare facilities should prepare for large increases in the number of suspected cases of COVID-19. Staff should be familiar with the suspected COVID-19 case definition, and able to deliver the appropriate care pathway. Patients with, or at risk of, severe illness should be given priority over mild cases. A high volume of cases will put staff, facilities and supplies under pressure. Guidance should be made available on how to manage mild cases in self-isolation, when appropriate. Plans to provide business continuity and provision of other essential healthcare services should be reviewed. Special considerations and programmes should be implemented for vulnerable populations (elderly, patients with chronic diseases, pregnant and lactating women, and children).

Health care providers being prepared to respond effectively to the significant increase in suspected COVID-19 cases

In the early stage of the pandemic, we have strengthened the coordination of medical resources and made every effort to improve diagnosis and treatment. First, we have concentrated on patients, experts, resources and treatment. Early intervention in mild and common cases can prevent mild symptoms from becoming severe. In severe cases, following the principle of "one person, one plan", the medical institutions do everything possible to improve the treatment effect including multidisciplinary diagnosis and treatment and the combination of Traditional Chinese and Western medicine. Second, we have added beds in a rapid manner. We have built temporary designated hospitals in the shortest period of time and emptied a number of large hospitals into designated hospitals for critical care. Taking into account the important fact that "80% of the patients are with mild symptoms", we have built a number of makeshift hospitals to treat the confirmed cases of mild illness. In Wuhan alone, the number of beds for COVID-19 patients reached more than 41,000 at the most, realizing the goal of "beds available" and ensuring that "All patients who should be admitted to hospital are admitted." and "All patients who should be treated receive

treatment." Third, we have given special consideration to the medical needs of the vulnerable groups. We have ensured medical services for special groups such as patients with acute and critical diseases, tumor patients, hemodialysis patients, pregnant women, the elderly and children who need emergency treatment.

In the stage of normalized prevention and control, we should strengthen precise prevention and control, so as to achieve "timely discovery, rapid disposal, precise control and effective treatment". First, we continue to improve the diagnosis and treatment plan. Eight editions of the plan have been published successively, providing the guidance and protocols for clinical practice. Second, we have standardized the fever outpatient settings and management. We have required all the general hospitals at and above the second level set up fever clinics, where closed-loop management and nucleic acid testing for all the patients with fever are practiced, and the test results should be reported in 4 to 6 hours. At present, more than 8,000 fever clinics have been set up nationwide, playing an important role in timely detection and detection of suspicious cases. Third, we have designated a certain number of hospitals and backups in provinces, cities and counties, where the COVID-19 patients can be treated collectively. At present, there are nearly 3,000 designated hospitals with a total of more than 1 million beds, 5-10% of which are for critical cases, providing a strong guarantee for the treatment of patients. Fourth, we have coordinated and mobilized strong medical resources in support of the treatment in key areas. We attach great importance to the precision of medical resources and the proportion of medical personnel and beds. To ensure that the first-line treatment force is sufficient, we have allocated medical resources in designated hospitals according to the bed-patient ratio of 1:2 and the physician-nurse ratio of 1:3 to 1:4.

Logistics support for operational measures.

Logistical arrangements to support incident management and operations should be reviewed. Expedited procedures may be required in key areas (e.g. surge staff deployments, procurement of essential supplies, staff payments).

Best practice: To ensure the needs of epidemic prevention and control, China has introduced policies of financial funding. For the medical expenses incurred by confirmed and suspected patients, the individual co-payment shall be subsidized by government, following the payment by basic medical insurance, critical illness insurance and medical assistance. Daily consumption of the medical personnel dispatched by the central government to Hubei are ensured through smooth funding channels.

Case Study: The central and local governments have allocated funds in batches to support the prevention and control of the epidemic. From January 23 to March 21, governments at all levels allocated 121.8 billion yuan, of which 25.73 billion came from the advance payment by the central government. Furthermore, the central government has granted 730 million yuan for such the projects as the Wuhan Huoshenshan Hospital, the Leishenshan Hospital, three designated hospitals for severe patients and the makeshift hospitals.

Any other relevant information.

Best practice: China actively carries out international cooperation and information sharing on the outbreak, supports the leadership and coordination role of the WHO, shares experience and practices in the fight against the outbreak, and provides relevant countries with material and technical assistance within our capacities.

Case Study: Since the outbreak, China has carried out communications and cooperation with the WHO. And in an open, transparent and responsible manner, it immediately informed the WHO and relevant countries of the outbreak, shared the virus gene sequence, probes and primers, and released protocols for the prevention, control, diagnosis and treatment. From January 27

to 29, the Director-General of the WHO, Dr. Tedros Adhanom Ghebreyesus was invited to visit China to exchange views on the prevention and control of the outbreak. Actively following the Temporary Recommendations under the IHR Emergency Committee, the WHO-China Joint Mission worked from February 16 to 24 in China and visited Beijing, Guangdong, Sichuan and Wuhan, Hubei, and issued a report on February 28, providing suggestions for the world to prevent and control the epidemic. On March 12, the National Health Commission held an international briefing on sharing Chinese experience in the prevention and treatment of COVID-19, established an online Knowledge Center, shared with the countries the English Version of the prevention, control, diagnosis and treatment protocols, committed to provide a total grant of USD 50 million to the WHO, and provided material and technical assistance within our capacities, contributing to global health and security.

THE REPUBLIC OF SOUTH AFRICA



Country-level coordination, planning, and monitoring

National public health emergency management mechanisms should be activated with engagement of relevant ministries such as health, education, travel and tourism, public works, environment, social protection, and agriculture, to provide coordinated management of COVID-19 preparedness and response. NAPHS and PIPPs, if available, should also be adapted to address COVID-19.

- There was strong political support and coordination of the whole-of-government response at both national and provincial level.

- The National Coronavirus Command Council (NCCC) and the National Joint Operations Centre (NATJOINTS) facilitated decisive action and the mobilisation of resources for the response.
- There was strong multi-stakeholder collaboration which facilitated the formulation and implementation of the risk-adjusted strategy.
- The establishment of a Ministerial Advisory Committee (MAC) ensured policy decisions are based on the best available evidence.
- Establishment of Incident Management Teams (IMTs) with Functional areas at National and provincial levels as well as in some districts. The IMTs have led operational and tactical aspects of the health response.

Risk communication and community engagement

Activities to inform the public about what is known about COVID-19, what has been done, and what measures are being taken on a regular basis. Support for public feedback to respond promptly to misinformation and "rumors".

- The establishment of Risk Communication and Community Engagement Technical Working Group in March 2020 – led by NDoH and includes other Gov Departments, Gov Agencies, and partners (donors, UN, and NGOs)
- Developed a community strategy that conformed to all national and international regulations.
- Active communication with broader coverage. COVID-19 messages developed and disseminated widely to all corners of SA using local languages
- Communicating as frequently (daily releases) and widely as possible to build trust with the public.
- Fake news/misinformation was addressed/rectified as soon as possible.

Surveillance, rapid response teams, and case investigation

- Establishment of a sentinel hospital surveillance system to monitor admissions and hospital deaths provided critical data for planning.
- Prompt integration of COVID-19 surveillance into existing Influenza-like-illness and pneumonia surveillance widened the scope of the system.
- Establishment of South African Covid-19 Modelling Consortium. The predictions from the models guided the scaling up of case management and testing capacities.
- The rapid development and updating of guidelines enabled standardised approaches to case finding, diagnosis, management, public health action.
- Deployment of field epidemiologists at Provincial level assisted with collation, analysis, reporting, contact tracing and investigation of new clusters.
- Coordination with various stakeholders at the local level (e.g. NGOs, academia, private sector) brought onboard additional expertise that improved data analysis, case investigation and contact tracing.

Points of entry

Efforts and resources at points of entry (POEs) should focus on supporting surveillance and risk communication activities.

- Comprehensive screening of all travellers while still aboard conveyances, was conducted
- Mandatory completion of Travellers Health Questionnaire was implemented
- Deployed additional staff to address the shortage of personnel at the Ports of Entry.

- Implementation of mandatory quarantine for returnees mitigated the risk of importation of additional cases

National laboratories

Ensuring efficient operation of laboratories for large-scale testing on COVID-19.

- Early development of the testing capacity for SARS-COV2 enabled the prompt detection of the imported cases.
- Notification of laboratory tests from all public and 27 private laboratories into a daily Notifiable Medical Conditions (NMC) line list that is shared with provinces
- Early lockdown allowed an assessment of the laboratory testing capacity
- Rapid roll-out of mobile testing improved access to testing and reduced the turnaround time.
- Collaboration with private laboratories significantly boosted the testing capacity across the country.

Adaptation of the applied practice of prevention and control of infections (inside and outside medical institutions)

Infection prevention and control (IPC) practices in communities and health facilities should be reviewed and enhanced to prepare for treatment of patients with COVID-19, and prevent transmission to staff, all patients/visitors and in the community).

- National IPC guidelines were developed and well received by stakeholders. IPC training was conducted and aligned to the facility's needs. Additional IPC training was coordinated and supported by WHO and Africa CDC

- IPC Framework approved and issued for implementation to Provinces and stakeholders
- The IPC team had the ability to work independently from Case Management

Case management

Healthcare facilities should prepare for large increases in the number of suspected cases of COVID-19. Staff should be familiar with the suspected COVID-19 case definition, and able to deliver the appropriate care pathway. Patients with, or at risk of, severe illness should be given priority over mild cases. A high volume of cases will put staff, facilities and supplies under pressure. Guidance should be made available on how to manage mild cases in self-isolation, when appropriate. Plans to provide business continuity and provision of other essential healthcare services should be reviewed. Special considerations and programmes should be implemented for vulnerable populations (elderly, patients with chronic diseases, pregnant and lactating women, and children).

- Clinician networks were established to provide technical support with the development of clinical guidelines. The use of existing structures was beneficial.
- Clinicians Training Team on Case Management was established to provide training support on guideline implementation and information dissemination
- Being flexible and having the ability to work with different work streams – without a fixed structure/s.
- Partnership and collaboration with Facilities Readiness Team, IPC, Emergency Medical Services (IMS) and others.

- A team was established to focus on quarantine and isolation needs and expectations in the early stages of the epidemic.
- Interdepartmental collaboration with the facility readiness team from the NDoH
- Assessments and approvals of the structures for isolation were done early in the epidemic

Logistics support for operational measures

Logistical arrangements to support incident management and operations should be reviewed. Expedited procedures may be required in key areas (e.g. surge staff deployments, procurement of essential supplies, staff payments).

- Forecasting was done with modelling Consortium and IMT leads which supported projecting stock holding requirements and timing
- Using experiences from the Affordable Medicines Directorate, a Stock Visibility Systems was established that facilitated tracking of stock levels
- Strengthening of supply chain management (SCM) procedures through trial and error, thus curbing of fraud and setting of benchmark prices outside of regular transversal tenders.
- Establishment of a governance system that allowed oversight of PPE and medicines supply chain
- Demand forecast tool for PPE at national and provincial level facilitated forecasting, planning, budgeting, and strategic pre-positioning of supplies to avoid stock-outs.
- Master procurement list for medicines and other commodities, which standardised procurement of medicines
- Centralised PPE reporting system ensured real-time access to stock levels at different levels.

- Establishment of quality assurance and supplier vetting system; this increased confidence in the supplies procured and the donations received.
- Early development of surge strategy (alignment and coordination with provinces)
- Availability and deployment of Facility Readiness Team and engagement with provinces (continuous basis)
- Established coordination and communication structures, including health facility visits.
- Up-scaling of oxygen supply was aligned to bed utilisation.
- Forecasting was done with the modelling Consortium and IMT leads; this facilitated budgeting assumptions and negotiations at National and Provincial level
- Introducing of FinCap system to Provinces for budgeting and expenditure reporting. The system enabled continuous monitoring of expenditure as well as potential budgeting impact in a constrained fiscal environment.

Any other relevant information

- Promotion of an online Knowledge Hub as a training platform. This Increased reach of target audiences and addressed training needs in real-time.
 - o Improved access to IPC and Clinical guidelines
 - o Facilitated support from Universities and training partners (including Fundisa, UCT, and Groote Schuur) to develop customised clinical training
- Engagement with Provinces established a forum to discuss challenges and provide guidance.

- Preparing and sharing draft documents beforehand as a basis for discussion with provincial teams
- Sharing best practices and experiences from Western Cape where the pandemic peaked first.
- Leveraging of existing platforms (repurposed the data repository designed for the National Health Insurance system). This ensured shorter delivery time for data needs.
- Use of standardised registries and system outputs brought about efficiencies (enabled more accurate comparisons), and therefore richer analytics (broader contextual factors can be considered)
- Rapid development and deployment of Nationally managed tools. This allowed for easier data management (when standardised tools are deployed)
- Testing at the household level allowed persons who could not easily reach health facilities to be screened and tested.
- Community engagement to support Community screening
- Provision of educational material to facilitate engagements in households and communities.
- The availability of Community Health Workers (CHW) and the ability to quickly train them (with the support from PEPFAR)
- Repurposing existing National Department of Health (NDOH) and Provincial Department of Health (DOH) staff for Capacity building, monitoring, implementation and reporting; this helped improve the quality of contact tracing and reporting.
- Use of CHW as a backbone to contact tracing.
- Deployment of National Contact Tracing teams in hotspots areas.

- Use of digital contact tracing applications like COVID-Connect.