

## COVID-19 outbreak: current scenario of Pakistan

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### Abstract

COVID-19 outbreak was first time experienced in the Wuhan City of China at the end of December 2019. Which spread rapidly in China and then worldwide in 209 countries of America, Europe, Australia and Asia including Pakistan. There are more than fifty thousand mortalities and one million plus people have been affected worldwide, while figure increases rapidly. Different steps have been taken worldwide for the control of COVID-19. Even with less resources Pakistan also taken rigorous measures like designed special hospitals, Laboratories for testing, quarantine facilities, awareness campaign and lock down to control the spread of virus. We highlighted the efforts of government to combat this deadly pneumonia.

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### Introduction

The COVID-19 outbreak was treated as a case of pneumonia with unknown etiology appeared in the Wuhan city of China, at the end of December 2019, which spread across the country to worldwide with a high rate [1]. The PRC (People's Republic of China) Centre for Disease Control (CDC) analyzed the respiratory samples and declared that the pneumonia was caused by a novel coronavirus which named the pneumonia as Novel Coronavirus Pneumonia (NCP) [2]. The coronavirus is one of the major virus that target the respiratory system of the human [3]. The Chinese researchers named the virus as 2019-nCoV [4]. Later, the International Committee on Taxonomy of Virus named the novel coronavirus as Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2) [5]. On the same day, February 11, 2020 the World Health Organization (WHO) name the Pneumonia as Coronavirus disease-19 (COVID-19) [6].

The World Health Organization (WHO) declared the COVID 19 outbreak as sixth public health of emergency Services (SPHEC) on January 30, 2020 [7]. This was not the first outbreak of the coronavirus. The previous coronavirus outbreaks include Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV) outbreak and Middle East Respiratory Syndrome Coronavirus (MERS-CoV) outbreak [8]. The COVID-19 thought the third outbreak of the coronavirus which affected more than 209 countries including Pakistan. According to the World Health Organization (WHO), total of 1,093,349 confirmed cases with 58,620 mortalities. To date, the number of highest positive cases encountered in USA followed by Italy and Spain [9].

The border countries of Pakistan highly affected including China, where the COVID-19 outbreak experienced first time. In the west, Italy with highest number of COVID-19 mortalities while in the north, Iran a high number of mortalities after the Italy [10]. In Pakistan, the first case of COVID-19 has been confirmed by the Ministry of Health, government of Pakistan on February 26, 2020 in Karachi, Sindh province. On the same day another case confirmed by the Pakistan Federal Ministry of Health in Islamabad [11,12]. Within fifteen days, the number of total confirmed cases (COVID-19 Positive) reached to twenty (20) out of 471 suspected cases with highest numbers in the

Sindh province followed by the Gilgit Baltistan. All of the confirmed cases had recent travel history from Iran, Syria and London. And currently these cases increase by high rate and the situation is worst [13].

The geographical location of Pakistan, with the continuous increases in the number of COVID-19 positive cases need a high level of action, planes and management. On 12th of February, the Ministry of National Health Services, Regulation & Coordination Pakistan presented a plane “National Action Plan for Preparedness & Response to Corona Virus Disease (Covid-19) Pakistan”, the aims to control the spreading of virus and to strengthen country and community emergency preparedness in order to ensure a timely, efficient and effective response to potential events due to Covid-19 including. The local, regional and national outbreaks that can have a significant impact on the health of Pakistani population and society [14]. To date, different steps have been taken by the government of Pakistan against COVID-19 outbreak. In this review, we highlighted the different steps taken by the government of Pakistan against COVID-19, such as designated hospitals, quarantine centers, testing facilities, treatments, public awareness and the response of local community against COVID-19 outbreak.

### Current situation in Pakistan

According to the Ministry of Health, government of Pakistan, there are total of 3277 confirmed positive cases in the country with 18 critical and 50 mortalities on Monday, April 6, 2020. The highest cases appeared in the Punjab province (1493) followed by Sindh (881), Khyber Pakhtunkhwa (405), Balochistan (191), Gilgit baltistan (210), Federal (82) and Azad Jammu & Kashmir have 15 confirmed cases. The results have been shown in figure. To date, the highest number of mortalities occurred in Khyber pakhtunkhwa with 16, followed by Punjab (15), Sindh (15), Gilgit Baltistan (3), Balochistan (1). A total of 85 infected people have been recovered in Sindh province, followed by KP (30), Balochitsan (17), and Punjab (25) GB (9) and AJK have one recovery till date as summarized in Table 1. The mortality rate in Pakistan is 1.3% and recovery rate is 4.8% [15].

### Facilitation by government of Pakistan against COVID-19

The Government of Pakistan is taking all the measures against the COVID-19 to provide and insure the responsibilities of the state for their people. Since the first day when the first case was conformed in Karachi city of Sindh all the services and

**TABLE 1.** The current figures of COVID-19 outbreak in Pakistan

S. No	Province	Confirmed cases	Mortalities	Recovered
1	Punjab	1493	15	25
2	Sindh	881	15	123
3	Khyber Pakhtunkhwa	405	16	62
4	Balochistan	191	01	30
5	Gilgit Baltistan	210	03	13
6	Azad Jammu & Kashmir	15	00	01
7	Federal (ICT)	82	00	03

measures were used with the extreme capabilities to ensure the safeness of life in the region. Meanwhile, all the cases have a travel history, suggesting transmission elsewhere being imported in the country. The government of Pakistan provides the COVID-19 mitigation strategies with their measures. Such as early case detection and Tracing and tracking of contacts, Risk communication, Social Distancing, Quarantine and Isolation to avoid the spread of COVID-19 [16].

The Government of Pakistan has established a COVID-19 Relief Fund to receive donation for the welfare of publics. Social network helplines were launched by the Government in seven (07) local languages. Communication Task Force Baluchistan with the support of UNHCR has developed IEC material in Dari and Pashto Languages. The materials will be distributed in all villages with refugees in Baluchistan. The Government of Khyber Pakhtunkhwa has issued directives for closure of OPDs and elective surgical services from 1-13 April 2020 in all the Tertiary Care Hospitals, District Headquarters Hospitals and Private Clinics throughout the province. The Central Emergency Relief Fund (CERF) has allocation \$ 60 million to Global Response plan for COVID-19. Sindh Government has established first drive through COVID-19 Testing facility in Karachi [17].

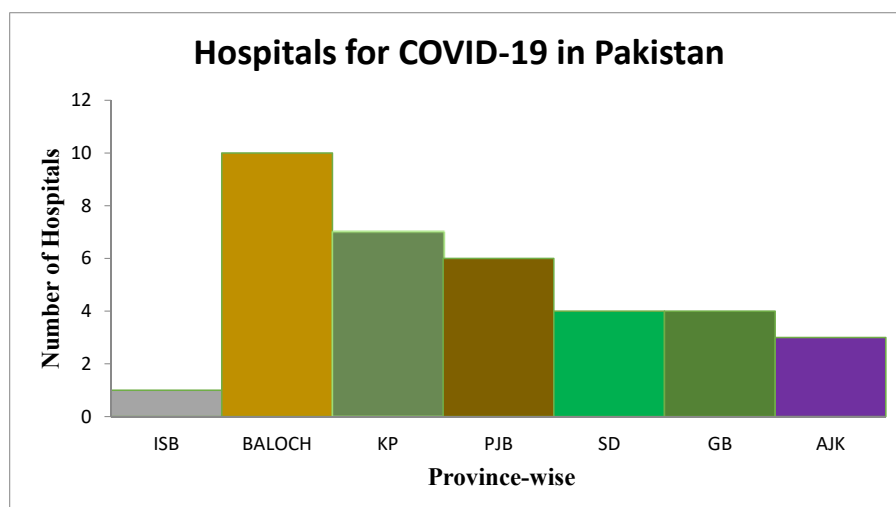
### Hospitals for COVID-19 in Pakistan

The arrangements to fight against the COVID-19, there are lots of measures being taken by the government of Pakistan to control the outbreak and facilitate their people. There were many hospitals been working in this scenario to bring back the life and fight against the deadly outbreak of COVID-19 in the country.

In the capital territory Islamabad, there was a single hospital functional. While in the Baluchistan, there were 10 hospitals for COVID-19. In Khyber Pakhtunkhwa (KP) 7, Punjab (PJB) 6, Sindh (SD) 4, Gilgit-Baltistan (GB) 4, and Azad Jammu and Kashmir (AJK) 3 hospitals were functional [18] as showed in the Fig. 1.

### Designated hospitals

Specific hospitals have been approved for admission and management of suspected and confirmed based upon availability of



**FIG. 1.** Number of Hospitals for COVID-19 in Pakistan.

quality isolation wards at Federal, provincial and regional level. Each institute and hospital are expected to conduct need and availability assessment of supplies (equipment, personal protective equipment, laboratory diagnostics) and including identification of sources to ensure provision and availability of PPEs and other equipment. Notify and train IPC (Infection prevention and control) team at the designated hospitals. A trained IPC focal person be nominated to ensure the IPC measures implanted and imbedded. The recently drafted National IPC guidelines/SOPs (Standard operational procedure) will be distributed and implemented which are following;

1. Standard Operating Procedures (SOPs) have been developed and disseminated for waste management at hospitals and airports. Local SOPs should be established and available in all HCFs with appropriate training of the staff assigned to handle the waste.
2. Disinfection and Environmental decontamination SOPs were developed.

Isolation wards were built all over Pakistan to prepare for COVID-19 pandemic, Province/Region wise number of designated Hospitals ICT-01, Punjab-06, Sindh-04, Baluchistan-10, KP-07, GB-04 and AJK-03. The total number of beds in isolation wards in whole country are 23,557 were established. In capital territory Islamabad 350 beds, Punjab 10,948, Sindh 2,100, Baluchistan 5,897, KP 2,760, GB 972 and in AJK 530 beds facilities were established in isolation wards [19].

#### Hospitals with isolation wards province-wise for COVID-19 in Pakistan

Isolation is different from quarantine, and is the separation of ill or infected persons from others, so as to prevent the spread of

infection or contamination. The hospitals use for isolation for COVID-19 people were widely disturbed in provinces which arise the good gesture which being use in this scenario throughout Pakistan to control the outbreak of COVID-19. The distributions of hospitals being used for isolation on districts basis.

In Islamabad (capital territory), there were been only one medical faculty using for isolation with the capacity of 10 beds. In the province of Baluchistan's 14 districts, each of them having medical facilities against COVID\_19, while some districts have more than single hospitals. In the province of Khyber Pakhtunkhwa's 33 districts. There were 110 medical facilities functional. In the province of Punjab's 34 districts. There were 50 medical facilities functional. In the Sindh province, in the 4 districts, 4 medical facilities were functional. In the Gilgit-Baltistan's, 10 districts have 21 medical facilities while in the Azad Jammu and Kashmir's 9 districts have 15 medical facilities as shown in Fig. 2. The number of bed and capacity of patients depend on the COVID-19 positive cases [20].

#### Quarantine facilities province-wise for COVID-19 in Pakistan

The Quarantines being used to restrict the activities or separation of persons (in a non-health care facility) who were not ill yet, but who might have been exposed to an infectious agent or disease such as COVID 19 with the objective of monitoring symptoms and early detection of cases. The places use for Quarantine of COVID-19 people was widely disturbed in provinces. The total number of Quarantine's 23,557 in 139 districts of the Pakistan which arise the good gesture which being use in this scenario throughout Pakistan to control the outbreak of COVID-19. In Islamabad the capital of the country,

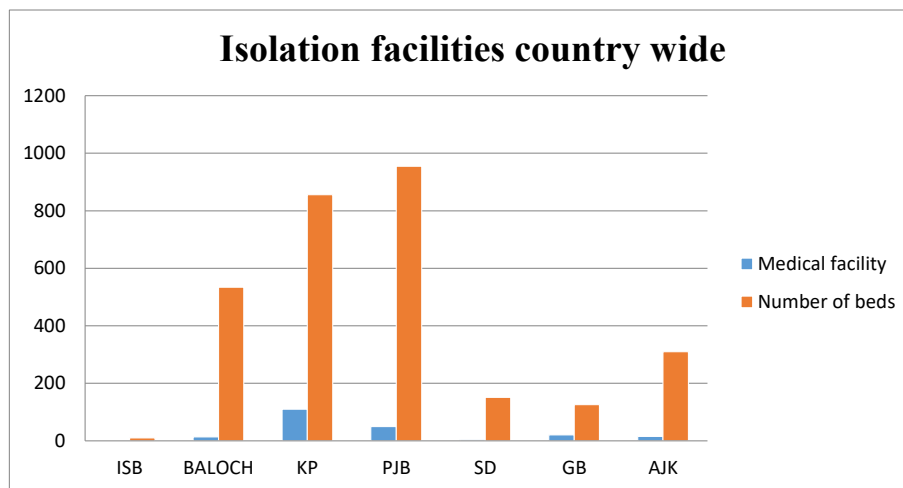


FIG. 2. Hospitals with isolation wards Province-wise for COVID-19 in Pakistan.

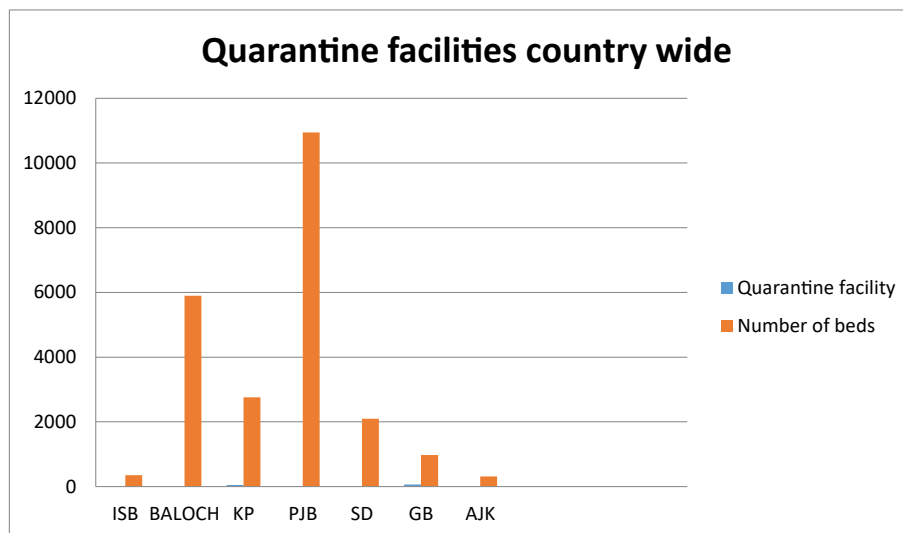


FIG. 3. Quarantine Facilities Province-wise for COVID-19 in Pakistan.

have allotted the two quarantine facilities. In the Baluchistan, there were 10, Khyber Pakhtunkhwa 52, Punjab 6, Sindh 2, while Gilgit-Baltistan 63 quarantine facilities were being functional as shown in the Fig. 3. In AJK there were 4 quarantine facilities were being functional in the various districts [21].

### Testing facilities in Pakistan

Globally PCR is used for COVID-19 test which are the best and easy method, so Pakistan's government also recommends PCR method. In different cities across the country 15 (ICT-01, Balochistan-01, KP-01, Punjab-04, Sindh-05, AJK-01, GB-01 and NIH mobile testing lab deployed in Taftan) laboratories have been equipped with free PCR system facilities for COVID-19 test. Pakistan's testing capacity has been increased from 30,000 to 280,000 and would be further enhanced to 900,000.

Since the outbreak the country has carried out nearly 15,000 coronavirus tests. In order to improve the testing efficiency, National Disaster Management Authority (NDMA) works with National Institute of Health (NIH) to rise the current number of coronavirus testing laboratories from 15 to 50. The new testing labs would be set in different cities across the country. Pakistan is also launching a training program for paramedics and laboratory staff to resolve the deficiency. NDMA would recruit 100 lab technicians with expertise in molecular biology [22].

### Conclusion and future prospects

The COVID-19 caused by SARS-CoV-2 in the Wuhan city of China which rapidly spread in 208 countries/regions including

USA, UK, Italy, Spain and Pakistan. The current scenario of Pakistan is not satisfactory as Pakistan is much populated country where required more facilitation. Pakistan is a developing country where the financial position is not better as compared to China, USA, UK, Russia to combat with COVID-19 outbreak. The number of hospitals and quarantine facilities being not fulfilled as required. If these medical facilities improved, then it will not be difficult to control the transmission of viruses and treatment of patients. Currently the testing facilities are much lower than the required target. The testing facilities could increase by five to ten (5 to 10) folds. The right steps should be taken to control the situation more worst such as staying at homes, lockdown, social distancing, using sanitizers, face mask when necessary. Pakistan needs more screening facilities for the arrivals as well as for the departures. It is hoped that Pakistan will overtake the COVID-19.

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Not Applicable.

### Consent for publication

Not Applicable.

### Availability of data

Data sharing not applicable to this article as no datasets were generated or analyzed during the current study.

### Declaration of competing of interest

The authors declares no conflict of interest.

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### Authors' contribution

AW and AK search the different data base for literature retrieval. AB arrange, compile the format, and handle the

correspondence. AW, AA and MA selected the literature and finalize the manuscript. The authors read and approved the final manuscript.

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