

## COVID Pandemic: Lessons for Pakistan

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The new pandemic of Severe Acute Respiratory Syndrome Coronavirus 2 or SARS-COV2 has spread rapidly to all regions and countries of the world since first described only three months ago. This novel coronavirus (formerly nCoV-19) that has not previously been seen in humans was identified in Wuhan, China in December 2019 after an epidemic of pneumonias and deaths.<sup>1,2</sup> It is thought most likely to have originated from animals and now easily transmitted among humans.<sup>3</sup> At high risk are individuals with age >70 years, diabetes mellitus, ischemic heart disease, hypertension, chronic lung disease and immunosuppression.

It mainly causes respiratory infections with variable presentations. A spectrum of symptoms from asymptomatic/mild flu like illness (81%), severe illness (~14%) and critical (5%) has been reported and may require hospitalization in 15-20%.<sup>4,5</sup> Symptoms reported include high-grade fever (with rigors and chills), cough and difficulty breathing. Other commonly reported symptoms are fatigue, myalgias, anosmia, headache, and atypical symptoms such as diarrhea and vomiting. Complications include acute respiratory distress syndrome like illness requiring ventilator support, myocardial injury, multi-organ failure, shock, suppurative bacterial pneumonia and worsening of chronic medical conditions (congestive heart failure, renal failure especially chronic obstructive disease). Approximately 5% are critical, 3-10% require mechanical ventilation and death occurs in 1-5%. Case fatality was reported high in older age (>80 years old 14.8% vs <50 years 2%) and those with co-morbid and without co-morbid (5-15% vs 0.9%).<sup>6</sup>

WHO declared this new illness a Public Health Emergency of International Concern on 30<sup>th</sup> January 2020 and officially named this new disease as coronavirus disease 19 or 'COVID-19'.<sup>7</sup> With rapid spread across countries and continents, WHO finally declared it a global pandemic on March 11,

2020. To date, April 20, 2020, there has been 1,919,913 confirmed cases with more than 119,666 deaths worldwide.<sup>8</sup> As the world grapples with new emerging information about the epidemiologic characteristic, presentations, diagnosis, treatment, outcome, prevention and other crucial aspects, the medical profession and healthcare are scrambling to save lives including management guidelines.<sup>9</sup> There is no specific antiviral treatment whose efficacy has been established. Supportive care is advised with timely involvement of critical care area team for early warning signs of respiratory distress. In Pakistan the total confirmed cases as of April 14 2020 according to National Institute of Health (NIH) are 5496 cases, 44 are critical and 93 deaths.<sup>10</sup> Globally, this pandemic has created significant administrative, clinical and operational challenges for leaders from all spectrums including public health, governments, clinicians and hospital administrators in terms of containment and mitigation.<sup>11</sup> The greatest strains so far been on understanding dynamics to contain the virus, diagnostic capacity, critical care capacity, health care work force and optimal infection control prevention by provision of appropriate personal protection equipment's (PPEs).<sup>12</sup> Suddenly, there was an acute shortage of testing capacity, isolation beds, intensive care beds, ventilators and finding the right cure or treatment. While this phenomenon has been almost universal even in the West, other struggling economies from developing countries such as Pakistan has been ill prepared and caught off guard to address this challenge.

In the initial phase, there was inadequate quarantine measures as well as testing capacity.<sup>13</sup> This created the first waves when potential infected international travellers from UK and other European countries and those crossing the borders from Iran and Afghanistan spread across different provinces and cities and towns of Pakistan.<sup>14</sup> Public and private sector hospitals across major cities lack basic ICU

and ventilators to take care of critically ill patients. According to the National Disaster Management Authority (NDMA), an estimated 2,200 ventilators are currently available in public sector, 2942 isolation beds and a mere 700 ICU beds.<sup>15,16</sup> NDMA along with National Coordination Committee announced the scaling up of these health facilities with 165000 quarantine facility beds, separate isolation wards, procurement of 2000 ventilators and order for additional 10000 ventilators, 500,000 N95 masks, 50000 testing kits expandable to 1000000 kits and another 15 tonnes of equipment.<sup>17</sup> Despite this unprecedented situation within Pakistan this acute shortage of such critical equipment speaks volumes of our healthcare facilities.

Pakistan must come together to rise to face this dooms day like scenario. The NIH has been at the forefront with public awareness, devising and circulating protocols, advisories, SOPs and a National Action Plan regarding COVID-19 prevention, transmission and detection. These actions mainly relate to the use of personal protective equipment and facemasks, the handling of suspected cases, sample collection and transport through virus transport medium, and adequate hand and general body hygiene, etc.<sup>18</sup> The NIH also provides support to all Pakistani provinces for establishing provincial surveillance units.

Federal and provincial governments must work in cohesion by putting up and sticking to the National Action Plan.<sup>19</sup> Lockdowns with phased easing of restrictions, provision of essential food, medicines etc. need to be in place till there is substantial reduction in the number of cases. Preventive measures need to be reinforced such as hand hygiene, cough etiquettes, self-isolation and social distancing to prevent community transmission. Hospitals and other health care setups must be upgraded to provide optimal care to those that require hospitalization and critical care. Infection control measures must be enhanced to encourage compliance by all HCWs and follow established guidelines. PPEs must be adequately provided and locally manufactured alternatives must be started on war footing.<sup>20</sup>

Unfortunately, this coronavirus pandemic has laid

bare the vast deficiencies in our health care facilities with a new and urgent need to overhaul our healthcare once and for all. Our healthcare preparedness must not become eyewash as this virus has not forgiven anyone and spared no one from its mortal wrath. So, a daunting task still lies ahead for all of us from all sectors to tackle this and any future challenge more effectively to save lives.

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