

## Coronavirus Pandemic

# COVID-19 Pandemic's precautionary measures had hit the reset button of the quality of life at different aspects

Huda H Alsayedahmed<sup>1</sup>

<sup>1</sup>Johns Hopkins Aramco Healthcare, Department of Quality and Patient Safety, Dhahran, Eastern province, Kingdom of Saudi Arabia

### Abstract

COVID-19 is a novel coronavirus that emerged in Wuhan-China during the last quarter in 2019 and caused an infectious respiratory disease pandemic. The strategy of "Attack and Defend" was attempted to mitigate COVID-19 crisis worldwide. A list of precautionary measures were set by healthcare professional experts to protect public from infection, social physical distancing measures being the most efficient. On the other hand, Occupational Safety and Health Administration (OSHA) has established protective guidelines for healthcare workers to guarantee a healthy workplace and safe environment. The physical distancing measures have obviously reshaped the relationship between family members leading to better quality of family life. Meanwhile, travel suspension also led to slightly higher health standards with less air pollution, lower traffic induced stress levels and subsequently a greener footprint. Herein, we intend to highlight the impact of COVID-19 pandemic protective measures on family connections, as well as on environmental health. Moreover, we aimed at pointing out the effect on Saudi Arabian cultural and humanitarian behavior in dealing with the pandemic under the governance care of the custodian of the two holy mosques; King Salman Al-Saud. In fact, a combination of restrictive and protective measures is the most efficient to curb COVID-19 spread. In addition to improving the quality of social life, this pandemic revealed a healthier climate, which will certainly be visible on a large scale. Certainly, all together with solidarity we will be able to restrain COVID-19 pandemic and have a better quality of life.

**Key words:** COVID-19; precautionary measures; social distancing; greener footprint.

*J Infect Dev Ctries* 2020; 14(8):812-816. doi:10.3855/jidc.12943

(Received 03 May 2020 – Accepted 13 July 2020)

Copyright © 2020 Alsayedahmed. This is an open-access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

### Introduction

Coronavirus disease emerged in Wuhan-China during the last quarter in 2019, henceforth called COVID-19 [1]. It causes a respiratory disease that is highly contagious and quickly spreads from person to person through air droplets during coughing or sneezing of an infected person [2]. However, contaminated objects or surfaces might be a source of infection as well. The infectious disease could range from moderate illness in healthy people to a serious pneumonia, organ failure and even death in low immunity and older patients [3-4].

### Protective control measures for public individuals

In fact, this pandemic has expanded to more than 200 countries and territories around the world after declaring an international outbreak. The worldwide strategy of "Attack and Defend" was attempted to mitigate COVID-19 crisis. At individual level to protect yourself and others, one must follow the precautionary measures set by healthcare professional experts such as the World Health Organization (WHO), Centers for

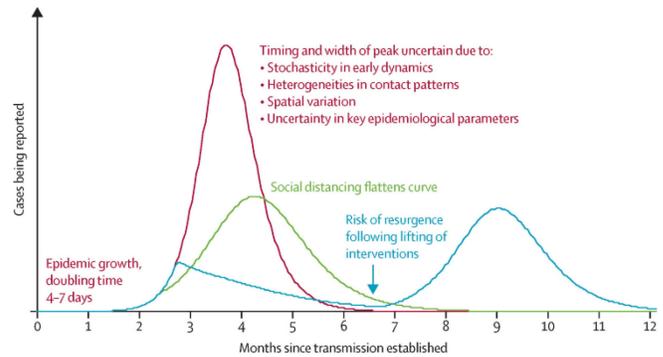
Disease Control and Prevention (CDC) and the Ministry of Health (MOH) of each specific country. Basic proactive and protective measures include avoiding contact with COVID-19 patients or people in contact with a positive patient, keeping a distance between each other, frequently washing hands or cleaning with disinfectant, covering your cough or sneeze with a clean tissue, and seeking medical care upon having any symptoms such as fever, dry cough or difficulty in breathing [3-5]. Nationwide, the most appropriate restrictive measure by consensus of the healthcare professional expert groups is the "physical social distancing" policy [5]. To combat the COVID-19 outbreak progression, a prominent measure taken by several governments across the world consisted of announcing lockdowns and imposing curfews to ensure social distancing, all schools and commercial centers closed, entry bans policy and travel restrictions enjoined. Meanwhile, the remaining option is staying at home, taking all safety precautions and not leaving houses except for essential reasons such as getting food or seeking medical service [5-6].

A broadcast to feature the real experience of healthcare workers and families around the world was created by WHO and global citizens to support healthcare providers in fighting the COVID-19 pandemic. “One world: Together at home” theme was placed on multiple online platforms globally, including social media to encourage suppressing the virus transmission [6]. Saudi Arabian behavior was paramount to control the spread. It has proactively implemented numerous precautionary measures taken in the unprecedented pandemic, with efforts to protect all citizens and residents from COVID-19 threats. This has been taken at all levels including health, wellbeing, and education. “Stay Home”, “Stay Safe”, “We shall show solidarity by staying at home”, “We are all responsible”, “Let’s keep the whole nation healthy and safe”, “Keep your distance”, “Avoid shaking hands and direct contact with others”, “Say hello with a smile”, “Don’t visit them call them”, “Keeping them safe is a priority”, are all themes of Saudi MOH mobile phone messages as preventive measures to elevate the sentence. Beside many other awareness messages, facts and guidelines of safeguarding our lives, enhancing health hygiene and self-quarantine when required until reaching healthcare facility for assistance when essential.

**Protective control measures for healthcare workers**

Certainly, healthcare personnel who believe that their employer is providing a healthy workplace and safe environment are eager and willing to work during such crisis. Healthcare facilities around the world follow recommended quality protective measures. Occupational Safety and Health Administration (OSHA) guidelines have set four principles for worker protection: consistently practicing social distancing, covering mouth and nose during cough and sneezes, maintaining hand hygiene and clean surfaces frequently. In addition to providing the proper personal protective equipment (PPE) training, hand hygiene toolkit, medication availability, and installing high-efficiency air filters in isolation rooms for COVID-19 patients. Never forgetting to keep healthcare workers updated about pandemic-related and essential communications. Other control measures might embrace changing practices or modification of current protocols, for instance implementing telemedicine policy including telecommunication setting, such as health assessment via video calls (i.e. virtual clinic), or using drive-through facilities to deliver medications

**Figure 1.** Simulation of COVID-19’s new case evolution in 2020.



safely, and privileging urgent care over routine practice [7].

**The impact of social distancing measure**

A theoretical hypothesis of physical distancing while taking all precautions aligned with Centers for Disease Control and Prevention (CDC) guidance, is highly likely expected to limit the virus spread and thus reduce the infection rate. A public health modeling indicates a steady increase in the number of positive cases in different world areas. Therefore, significant efforts are absolutely needed to emphasize full social distancing through May 2020 aiming to flatten the curve [8]. Similarly, a study conducted in Wuhan in February 2020 where such protective measure achieved a big success in battling the pandemic. However, quantitative data are required to predict the impact of this measure and whether it is sufficient to control the pandemic [10]. A study from Anderson RM *et al* published in March 2020 illustrated a typical epidemiological curve showing the result of a recent simulation on COVID-19 possible evolution during the whole 2020 (Figure 1). The graph suggests pulling down the curve as a response to social distancing efforts [11].

Although it is quite challenging to implement such strict measures in the Kingdom of Saudi Arabia because of its social culture and religious norms in a country hosting an international mass gathering annually. However, its decisive early initiation of social distancing and adoption of other restrictive measures before the outspread was wise, despite their religious, socio-economic, and politics in the interest of public and global health [12]. Saudi Center for Disease Prevention and Control revealed that it is hard to predict the infection rate. In fact, if people ignore MOH advice the virus would ultimately spread to more persons, in accordance with the health executive expert/ preventive

medicine and public health specialist [13]. Thus, an important element is that governments have to be fully transparent and use evidence-based interventions to achieve the ultimate goal of mitigating the outbreak successfully [14].

### **Corona pandemic is re-setting the quality of life, and the nature is recovering**

Saudi Arabia has indeed started social distancing since almost a decade ago, when technology has been managing us and keeping us away from family until higher levels of depression and other health problems have been observed [15]. In the culture of Saudi Arabia extended families live together so that self-isolating within the home still allows intergenerational contact and minimal loneliness. This experience implies that we can all eat healthy homemade food and live without fast food meals. The physical distancing measure has obviously reshaped relationships leading to better quality of family life, as individuals spend more time together, staying indoor organizing family activities. Nevertheless, the effective impact of physical distancing measures in Saudi Arabia refers to its noble society standards represented in money donation for people in need not only within the kingdom but also towards other countries. Furthermore, willingness of people to volunteer in dealing with the pandemic effect, either through offering money or promptly providing healthcare, was a great behavior. In other words, some countries with different cultural demeanor had a traumatic impact, such as in some places where each family is segregated in multi-generation households, where the physical distancing strategy is keeping families apart with limited or no socialization activities. This also pulls the attention to those who live in indigence and poverty as they will suffer being isolated if are not looked after by others. Additionally, with an unprecedented economic impact, several people lost their employment or income leading to multiple stressors. This is not happening in Saudi Arabia under governance of the custodian of the two holly mosques, while others are scared due to infection or fear of losing their beloved family members. This in turn can lead to distress within a family, raise problems such as drinking alcohol, drug abuse, anxiety, depression or other mental health issues if left unattended by governmental and other humanitarian intervention. Actually, the rapid transmission of the COVID-19 represents a serious challenge in terms of psychological health aspects as well as for mental health service [16-19]. At the same time, lockdown measures, travel suspension and more reliance on home delivery services with online

shopping, slightly contributed to a healthier environment with less air pollution, traffic stress, lower CO<sub>2</sub> levels and consequently a greener footprint. Logically, healthy planet means fewer disease. However, the United Nation Environmental Program (UNEP) has raised concerns that COVID-19 is not a “silver lining” for the climate, as the pandemic resulted in increased harmful medical waste [20]. Alongside with outlawing gathering on beaches and parks these measures had a healthier effect on plants, animals, and cleaner seas. Therefore, this might create an access imitation to enjoy the nature and outdoor wellbeing practices. Probably this pandemic will alert the world governments to innovate aiming at alleviating the harm to natural places and preserving their quality.

Moreover, social distancing has a thoughtful impact on resetting humanity, changing the global attitude, population behavior, leading to lower levels of fighting or at least reshaping diplomatic relations, although this is quite challenging. According to the world news, United Nations appealed for ceasefires in all major conflicts in Middle East. The Observatory of human rights in Syria witnessed less civilian deaths during March. Yemen’s government has responded initially to UN request, in addition to Saudi Arabia offer to cease-fire in Yemen. Likewise, Libya and Iraq welcomed the UN ceasefire call and the conflicts stopped for a while, even though they swiftly resumed convoluted hostilities. Despite the fact that this peaceful action lasted for a limited period during the pandemic, a mutually supportive behavior has been observed.

### **What is next?**

Indeed, every country across the world is eager to join the small group of countries that so far, like China, have obviously managed to control the pandemic, making all possible efforts to prevent the recurrence of the infectious pandemic. Controlling the virus in the next year will depend on several factors; firstly, healthcare system readiness and efficiency. Secondly, having all the required resources including enough qualified health care providers and sufficient medical supply chain. Thirdly, the exact pathophysiology of COVID-19, the complexity of its transmission, and whether it is a seasonal virus would play a vital role. The latest factor will ultimately rely on the impact of social-distancing measures and its consequence during the current pandemic, knowing how effective this measure was in controlling the outbreak [21]. In fact, the virus transmission slows down or stops when large population proportion becomes immune to the novel coronavirus due to either vaccination or natural

immunity through exposure during the pandemic period. Epidemiology experts believe in the need of population vaccination to build up a community immunity or herd immunity. However, until reaching this stage the mortality rate would be hard to accept [21-22].

### Conclusions

In conclusion, a combination of restriction and protection measures including lockdown public services, imposing curfew, applying quarantine to epidemic zones, impactful physical social distancing, in addition to taking all the health hygiene precautions are impressively effective to curb the COVID-19 spread. During the stressful period, it is essential to savor the good things in life. Certainly, these potential strategies integrated into our routine hit the reset button of quality of the family life in the majority of cases, including in Saudi Arabia, though it has affected the psychological health of others under special circumstances in some other cultures. Therefore, the need for mental health support services is huge at all cultural levels. More importantly, the restrictive measures resulted into a healthier environment, less polluted and greener footprints, which will certainly be visible on a large scale. Finally, all together with solidarity we will gain the fruitful leverage being capable to protect the world from COVID-19 pandemic and trigger a preferable quality of life.

### Acknowledgements

I thank every person who believed in my capabilities as a researcher and encouraged me to do such work by myself. A special thanks to Mr. Ali Abandi (Senior Health Care Quality Analytics Specialist) for his efforts in adjusting the resolution of the figure.

### References

- Li Q, Guan X, Wu P, Wang X, Zhou L, Tong Y, Ren R, Leung KSM, Lau EHY, Wong JY, Xing X, Xiang N, Wu Y, Li C, Chen Q, Li D, Liu T, Zhao J, Liu M, Tu W, Chen C, Jin L, Yang R, Wang Q, Zhou S, Wang R, Liu H, Luo Y, Liu Y., Shao G, Li H, Tao Z, Yang Y., Deng Z, Liu B, Ma Z, Zhang Y, Shi G, Lam TTY, Wu JT, Gao GF, Cowling BJ, Yang B, Leung GM, Feng Z (2020) Early transmission dynamics in Wuhan, China, of novel coronavirus-infected pneumonia. *N Engl J Med* 382: 1199-1207.
- Ong SWX, Tan YK, Chia PY, Lee TH, Ng OT, Wong MSY, Marimuthu K (2020) Air, surface environmental, and personal protective equipment contamination by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) from a symptomatic patient. *JAMA* 323: 1610-1612.
- National Agency of Healthcare Quality (2020) COVID-19 Resources for the Healthcare Professional. NAHQ. Available: <https://nahq.org/wp-content/uploads/2020/03/COVID-19-Resources-for-the-Healthcare-Professional.pdf>. Accessed 17 March 2020.
- Centers for Disease Control and Prevention (2020) What you need to know about coronavirus disease 2019 (COVID-19). CDC. Available: <https://www.cdc.gov/coronavirus/2019-ncov/downloads/2019-ncov-factsheet.pdf>. Accessed 20 March 2020.
- World Health Organization (2020) Coronavirus disease (COVID-19) advice for the public. WHO. Available: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public>. Accessed 5 April 2020.
- World Health Organization (2020) WHO and Global Citizen announce 'One World: Together at home' Global Special to support healthcare workers in the fight against the COVID-19 pandemic. WHO. Available: <https://www.who.int/news-room/detail/06-04-2020-who-and-global-citizen-announce-one-world-together-at-home-global-special-to-support-healthcare-workers-in-the-fight-against-the-covid-19-pandemic>. Accessed 5 April 2020.
- Occupational Safety and Health Administration (2020) Fact sheet: Protecting Workers during a Pandemic. OSHA. Available: <https://www.osha.gov/Publications/OSHA-FS-3747.pdf>. Accessed 1 February 2020.
- Mayor MJW (2020) Stricter measures in place for social, physical distancing to curb COVID-19 impact. Public Health Commission. Available: <https://www.boston.gov/news/stricter-measures-place-social-physical-distancing-curb-covid-19-impact>. Accessed 5 April 2020.
- Prem K, Liu Y, Russell TW, Kucharski AJ, Eggo RM, Davies N, Jit M, Klepac P (2020) The effect of control strategies to reduce social mixing on outcomes of the COVID-19 epidemic in Wuhan, China: a modelling study. *The Lancet Public Health*: 1-10.
- Jarvis CI, Zandvoort KV, Gimma A, Prem K, Klepac P, Rubin GJ, Edmunds WJ (2020) Quantifying the impact of physical distance measures on the transmission of COVID-19 in the UK. *BMJ*. In press.
- Anderson RM, Heesterbeek H, Klinkenberg D, Hollingsworth TD (2020) "How will country-based mitigation measures influence the course of the COVID-19 epidemic?". *The Lancet* 395: 931-934.
- Yezli S, Khan A (2020) COVID-19 social distancing in the Kingdom of Saudi Arabia: Bold measures in the face of political, economic, social and religious challenges. *Travel Med Infect Dis* 21: 101692
- Radwan R (2020) COVID-19 prevention better than cure say Saudi health experts. ARABNEWS. Available: <https://www.arabnews.com/node/1648596/saudi-arabia>. Accessed 8 April 2020.
- Lewnard JA, Lo NC (2020) Scientific and ethical basis for social-distancing interventions against COVID-19. *Lancet Infect Dis*. 20: 631-633
- Pantic I (2014) Online social networking and mental health. *Cyberpsychology behavior and social networking* 17: 652-657.
- United Nation News (2020) UN leads call to protect most vulnerable from mental health crisis during and after COVID-19. UN News. Available: <https://news.un.org/en/story/2020/05/1063882>. Accessed 14 May 2020.

17. World Health Organization (2020) Mental health and psychosocial considerations during the COVID-19 outbreak. WHO. Available: [https://www.who.int/docs/default-source/coronaviruse/mental-healthconsiderations.pdf?sfvrsn=6d3578af\\_2](https://www.who.int/docs/default-source/coronaviruse/mental-healthconsiderations.pdf?sfvrsn=6d3578af_2). Accessed 18 March 2020.
18. Li W, Yang Y, Liu ZH, Zhao YJ, Zhang Q, Zhang L Cheung T, Xiang Y-T (2020) Progression of Mental Health Services during the COVID-19 Outbreak in China. *International journal of biological sciences* 16: 1732–1738.
19. Holmes EA, O'Connor RC, Perry VH, Tracey I, Wessely S, Arseneault L, Ballard C, Christensen H, Silver RC, Everall I, Ford T, John A, Kabir T, King K, Madan I, Michie S, Przybylski AK, Shafran R, Sweeney A, Worthman CM, Yardley L, Cowan K, Cope C, Hotopf M, Bullmore E (2020). Multidisciplinary research priorities for the COVID-19 pandemic: a call for action for mental health science. *Lancet Psychiatry* 7: 547–560.
20. United Nation News (2020) First Person: COVID-19 is not a silver lining for the climate, says UN Environment chief. UN News. Available: <https://news.un.org/en/story/2020/04/1061082>. Accessed 5 April 2020.
21. Craven M, Liu L, Mysore M, Singhal S, Smit S, Wilson M (2020) COVID-19: Implications for business. McKinsey & Company. Available: <https://www.mckinsey.com/business-functions/risk/our-insights/covid-19-implications-for-business>. Accessed 13 April 2020.
22. Kwok KO, Lai F, Wei WI, Wong SYS, Tang JWT (2020) Herd immunity – estimating the level required to halt the COVID-19 epidemics in affected countries. *J Infect* 15:1-2.

**Corresponding author**

Huda Alsayedahmed, PhD  
 Quality and Patient Safety Department, Johns Hopkins Aramco Healthcare, Aramco Gharb Al Dhahran, 6th Street, 1709, Dhahran, Saudi Arabia.  
 Phone: 00966504803854  
 Email: [huda.alsayedahmed@jhah.com](mailto:huda.alsayedahmed@jhah.com); [ummajdhuda@yahoo.com](mailto:ummajdhuda@yahoo.com)

**Conflict of interests:** No conflict of interests is declared.