

COVID-19 and Importance of Social Distancing

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Abstract

The current outbreak of the novel coronavirus also known as COVID-19 was declared as a public health emergency by the WHO where over a million people have been affected by the disease with over 50000 deaths till date. Social distancing is a method to minimize crowd interactions and prevent the spread of disease within groups of people. This is a common practice which has been carried out over generations to minimize the spread of virus by limiting its reproduction rate (R_0) among communities. The article focuses on how social distancing has been used to deal previous pandemics globally and

the issues that needs to be addressed to tackle the COVID-19 threat.

Keywords: COVID-19; R_0 ; WHO; social distancing; H1N1; H2N2; influenza

Introduction

The current outbreak of the novel coronavirus also known as COVID-19 was declared as a public health emergency by the WHO where over a million people have been affected by the disease with over 50000 deaths till date. A reported 200 countries have reported cases of COVID-19 with United States having the greatest number of cases and Italy having most fatalities caused by death [1]

The severity of the disease ranges from asymptomatic to fatal stages mostly affecting people with a weak immune system and the elderly population. COVID-19 differs from SARS-COV where patients in the prodromal period have the ability to produce large amount of virus replications

contributing to the spread of the infections. In SARS-COV patients transmission occurred only when severe illness was observed making it easier to be detected unlike COVID-19 [2]. The route of transmission predominantly has been identified as through droplet and airborne transmission, several studies are still being conducted over the presence of COVID-19 in air samples and WHO has not identified the disease as an airborne disease till date [3].

A majority of the patients are tested only if the symptoms are shown by them, thus making it less reliable to identify the number of “hidden deaths” caused by COVID-19. The need for testing has been stressed out by the WHO on a regular basis, with lack of test kits and personal protective equipment (PPE) in several countries there is a high chance that a lot of patients suffering from COVID-19 goes undetected [4].

Social Distancing in Pandemics

What is the importance of social distancing due to COVID-19 outbreak? Many of us have been used to hearing the term social

distancing and lockdowns in several countries, initially the lockdown was initiated in Wuhan, China to prevent the spread of the disease to other parts of the country and gradually other countries such as Italy, Germany, Israel, Sri Lanka, India, UK, France, Belgium started to follow the same process.

Social distancing is a method to minimize crowd interactions and prevent the spread of disease within groups of people. This is a common practice which has been carried out over generations, i.e. the student and teacher interactions where most students avoid being closest to the teacher and prefer staying in last rows [5]. During the 1918 influenza pandemic a reported 50 to 100 million deaths were reported worldwide, although social distancing was not implemented back in 1918 majority of the population took “reactive social distancing measures” that made it possible to escape the disease outbreak [6]. This behavioral practice followed by several millions led to the pandemic limiting the damage after WW1 in several European countries. The same process was followed

during 1957/58 for the spread of H2N2 virus (Asia Flu) where Asians were limited to travel across borders and stay indoors during the pandemic [7]. Most recently a decade ago the outbreak of H1N1 also known as swine flu affected nearly 60 million individuals, the spread of the disease was controlled using general measures such as social distancing to avoid human to human transmission of the disease [8].

Importance of Social Distancing Practices

In the modern world interactions are done on regular basis using technology available but majority activities carried out on a daily basis relies on social interaction. Social interaction and contact is necessary as an economical perspective for the country as workers need to function on a regular basis to allow cash flow in their respective companies, it is also essential part of traders and consumers to generate income [9].

Social distancing practices allows individuals to maintain distances from each

other for a period of time to ensure the spread of the disease is minimized. This would reduce the basic reproduction number (R_0) of the virus which would minimize the disease spread. A study carried out by Prem and team of researchers [10] identified that is social distancing practices were carried out properly an estimate of 92% of cases will be lowered by the end of 2020. An individual affected with COVID-19 has the ability to spread it to 2-3 people which will go on until they are distanced from each other. There are two common practices followed using social distancing, one of them is social distancing and maintaining a distance of nearly 1m within individuals and the other being staying indoors at home. This practice has been successful in the past and in the present as well where Wuhan was able to flatten the disease spread by following these practices.

This is a zero-cost method that is entirely dependent on behavioral patterns of individuals where most of them do not abide by the rules put out in the country [11]. If social distancing methods are ignored the

effect could last on for the upcoming generations as the COVID-19 virus will be able to develop different strains where till date eight different strains of the virus has been discovered by scientists [12].

Discussion

The outbreak of coronavirus was an unexpected phenomenon that has turned the whole world into lockdown, although most scientists and individuals blame the Chinese over the spread of the disease there has been significant downfalls from healthcare setups that has made this another pandemic.

Several countries have been able to impose travel restrictions and work at home measures to reduce the reproduction rate and spread of the virus among communities but till date the number of tests being conducted globally are low. Patients who show symptoms are considered for testing whereas the silent carriers who do not express symptoms are not being tested [13]. The lack of test kits availability has led to several laboratories limiting their resources in order to identify the most vulnerable individuals to test on,

this is a cost-effective practice carried out in several countries which could become a major issue if not addressed soon.

PPE have been used widely by healthcare workers and staff to ensure the disease spread is limited within the hospital. The global demand of PPE has led to several healthcare workers being exposed to COVID-19 that has led to several deaths [14]. The lack of awareness and preparedness by several healthcare sectors has led to further complications in dealing with COVID-19.

Social distancing can also have its own implications where several countries economy has been dented significantly over the past few months and urgent need of money to get daily essentials have led people to panic buying which led to crowd gathering. Middle-low income countries such as India, Sri Lanka and Bangladesh have seen this mass crowd gatherings which could have impacted the spread of COVID-19. Another problem caused by social distancing is individuals being trapped indoors leading to be depressed and feeling lonely having a significant

impact on psychological mindset of the individual. Misleading and false messages and reports also play a substantial role in damaging the overall mental strength and perception of the person leading to increased thoughts and concern [15].

Conclusion

With the global cases of COVID-19 on the rise the need for testing kits and PPE for healthcare workers should become the highest priority for every country to limit and detect the disease early. Moreover, social and mental support needs to be given to people suffering from depression and loneliness during this period of isolation through online portals and communication lines to prevent mental health problems. Finally, it is our responsibility to stay aware of COVID-19 and report to health authorities if any symptoms and signs are present rather than hide it. Maintaining social distancing for a period of time will ensure that the spread of disease is lowered.

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References

1. <https://www.google.com/covid19-map/>
2. Lipsitch, M., Swerdlow, D.L. and Finelli, L., 2020. Defining the epidemiology of Covid-19—studies needed. *New England Journal of Medicine*.
3. <https://www.who.int/news-room/commentaries/detail/modes-of-transmission-of-virus-causing-covid-19-implications-for-ipc-precaution-recommendations>
4. Vetter, P., Eckerle, I. and Kaiser, L., 2020. Covid-19: a puzzle with many missing pieces.
5. Schwebel, A.I. and Cherlin, D.L., 1972. Physical and social distancing in teacher-pupil relationships. *Journal of Educational Psychology*, 63(6), p.543.
6. Yu, D., Lin, Q., Chiu, A.P. and He, D., 2017. Effects of reactive social distancing on the 1918 influenza pandemic. *PloS one*, 12(7).
7. Jackson, C., 2009. History lessons: the Asian Flu pandemic. *Br J Gen Pract*, 59(565), pp.622-623.

8. Sebastian, M.R., Lodha, R. and Kabra, S.K., 2009. Swine origin influenza (swine flu). *The Indian Journal of Pediatrics*, 76(8), p.833.
9. Maharaj, S. and Kleczkowski, A., 2012. Controlling epidemic spread by social distancing: Do it well or not at all. *BMC Public Health*, 12(1), p.679.
10. Prem, K., Liu, Y., Russell, T.W., Kucharski, A.J., Eggo, R.M., Davies, N., Flasche, S., Clifford, S., Pearson, C.A., Munday, J.D. and Abbott, S., 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*.
11. Reluga, T.C., 2010. Game theory of social distancing in response to an epidemic. *PLoS computational biology*, 6(5).
12. <https://www.news-medical.net/news/20200331/Eight-strains-of-coronavirus-afflicting-the-world.aspx>
13. <https://www.nature.com/articles/d41591-020-00005-1>
14. GAN, W.H., LIM, J.W. and David, K.O.H., 2020. Preventing intra-hospital infection and transmission of COVID-19 in healthcare workers. *Safety and Health at Work*.
15. Zheng, Y., Goh, E. and Wen, J., 2020. The effects of misleading media reports about COVID-19 on Chinese tourists' mental health: a perspective article. *Anatolia*, pp.1-4.