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Preventive Measures Against COVID in Public Places

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ABSTRACT

Aim: The aim of the study is to analyze various preventive measures implemented to the public in the prevention and control of the spread of COVID-19.

Methods: A systematic search strategy was employed using keywords to search the literature in various medical databases like PubMed and Google scholar using keywords COVID-19, Prevention, Transmission, Symptoms, and Treatment. Over 80 articles were collected and reviewed thoroughly.

Discussion: Coronavirus disease 2019 (COVID-19) is an illness caused by a novel coronavirus, now called Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2). Prevention and control strategies and methods are in three levels: national level, case-related population level, and general population level. Patients with COVID-19 have symptoms of fever, dry cough, and tiredness and series symptoms are shortness of breath. Infection prevention and control measures that can reduce the risk of exposure of the COVID-19 include the use of face mask, covering coughs and sneezes with tissue paper, regular hand wash, avoiding contact with infected people, and not touching your eyes, nose, and mouth frequently. Restrict your travel to many states and stay home, except to make essential trips to the grocery store, and pharmacies. Masks are recommended as a potential tool when it comes to tackling the COVID-19 pandemic since the initial outbreak in China. Masks are also being used by blocking droplets ejected by the wearer thereby acting as source control. In the absence of a vaccine or effective antiviral drugs, hand hygiene may be a mainstay of efforts to stop the spread of severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2), the virus that causes COVID-19.

Conclusion: The only way to control is to prevent and control the spread, by physical distancing, facial mask, and use sanitizer.

Key Words: COVID-19, Prevention, Transmission, Public places, Symptoms, Treatment

INTRODUCTION

Coronavirus disease 2019 (COVID-19) is an illness caused by a novel coronavirus, now called Severe Acute Respiratory Syndrome Coronavirus-2 (SARS –Cov-2)¹. The coronavirus belongs to a large single-stranded RNA family virus that may cause various symptoms such as fever, breathing difficulty, and respiratory infection². It is still too soon to anticipate powerless populaces, early examples have indicated a comparable pattern to Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS) coronavirus³. Vulnerability is by all accounts related to age, natural sex, and other wellbeing conditions^{4,5}. COVID-19 has now been

proclaimed as a Public Health Emergency of International Concern by the WHO^{6,7}.

Prevention and control strategies and methods are in three levels: national level, case-related population level, and general population level⁸. Several public health measures that may prevent the transmission of the COVID-19 are case isolation, identification and follow up of environment disinfection, and use of personal protective equipment^{9,10}. A series of measures have been taken to reduce nosocomial infection, this includes knowledge and preparation for anticipation and control segregation, purification, grouped assurances at various degrees in disease territories, and insurance of affirmed cases¹¹. A bacterial infection caused by Mycobacterium spe-

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cies¹² shows similar symptoms of COVID-19 which has to be treated at an earlier stage.

For the general population, at this moment there is no vaccine to prevent COVID-19. The best way to prevent it is to avoid being exposed to the virus¹³. Infection Prevention and Control (IPC) measures that can reduce the risk of exposure of the COVID-19 includes use of face mask; covering coughs and sneezes with tissue which can be safely disposed, regular handwashing with soap or disinfection with hand sanitizer, avoiding contact with infected people and maintaining appropriate distance as much as possible and not touching the eyes, nose, and mouth with unwashed hands¹⁴. COVID-19 spreads mainly from patients to patients or person to person through respiratory droplets¹⁵. Some studies show that people who are infected will be asymptomatic, this plays a major role in spreading coronavirus¹⁶.

According to the centers for Disease Control and Prevention (CDC), individuals who fall into certain higher-risk categories are such as older adults and those who have serious chronic medical conditions (like heart disease or lung disease) should avoid large crowds and mass public gatherings¹⁷. The WHO emergency committee says that the number of cases reported among health care workers from hospitals was amplified due to overcrowding in public places and inadequate infection control measures¹⁸. There is much more to find out about functions related to 2019-nCoV and illnesses have ranged from mildly unwell human beings to several sick and dying^{19,20}. Previous collected articles emphasized particularly on individual preventive measures against COVID. The current article emphasized public preventive measures against COVID-19 and to assess the preventive measures against COVID in public places.

Prevention of COVID-19

Wash your hands frequently with cleanser and water in any event for 20 seconds particularly after you have been in an open spot or subsequent to cleaning out your nose, hacking, or sniffing. Utilize a hand sanitizer that contains 60% liquor. Abstain from contacting your eyes, nose, and mouth with unwashed hands²¹. After touching the contaminated surface and placing a finger on the eye causes infections²². Avoid close contact with people who are sick, even inside your home. Maintain 6 feet between the person to person²³. Do not gather in groups, social distancing is must^{24,25}. CDC recommended the guidelines on face masks that people can wear cloth face-covering in public settings²⁶. This is particularly supported in circumstances where social distancing is hard to maintain²⁷. Likewise, careful covers and N-95 respirators ought to stay held for medicinal services workers²⁸. Clean and disinfect frequently touched surfaces daily. If the surfaces are dirty, clean them and use household disinfectant²⁹. In an event where you are in an open place and don't have your face secured, make sure to consistently cover your mouth and nose

with a tissue when you cough or sneeze and use the inside of your elbow to cover the face (**Figure 1**). Dispose of used tissues in the trash^{30,31}.



Figure 1: Figure depicts the preventive measures to be followed in order to safeguard themselves from disease-causing coronavirus.

Restrict your travel

Many states have put out the call for individuals to stay home, except to make essential trips to grocery stores, pharmacies or other outdoor activities^{32,33}. CDC recommends that travelers avoid all non-essential travel to other states or countries³⁴. Stay up to date with CDC's travel health notices related to this outbreak^{35,36}. Travelling can also spread the coronavirus. Staying safe at home is better to prevent the spread of COVID-19^{37,38}.

Face mask

The science around the utilization of veils by the overall population to obstruct COVID-19 transmission is progressing rapidly³⁹. Policymakers need critical direction on the utilization of covers by everyone as an instrument in fighting SARS-CoV-2, the respiratory infection that causes COVID-19. Veils have been prescribed as a possible instrument to handle the COVID-19 pandemic since the initial outbreak in China⁴⁰. There is currently a global shortage of N95/FFP2 respirators and surgical masks to use in hospitals⁴¹. Masks can be made of different materials and designs which influence their filtering capability⁴². There are thorough norms assessing veils utilized in social insurance settings however these are focused on close to Personal Protective Equipment (PPE)⁴³. Efficacy is the capacity of the veil to shield the wearer from irresistible particles⁴⁴. Even substantial differences in materials and construction do not seem to

impact the transmission of droplet-borne viruses in practice, such as a meta-analysis of N95 respirators compared to surgical masks⁴⁵. Masks can also be used for source control, which refers to blocking droplets ejected by the wearer. If everyone wears masks it decreases the chance of spreading infection and being more protected⁴⁶. Wearing a mask as source control is to stop the process from spreading through aerosol infection. Since big droplets dehydrate to smaller aerosol particles that can float for a longer distance in air⁴⁷. A comparison of homemade and surgical masks for bacterial and viral aerosols observed that “the median fit factor of the homemade masks was protective to one-half that of the surgical masks⁴⁸. Public mask-wearing is most effective in reducing the spread of the virus when compliance is high⁴⁹.”

Hand sanitizer

According to the Center for Disease Control (CDC) hand hygiene encompasses the cleansing of your hands by using handwashing with soap and water, antiseptic handwashes, antiseptic hand rubs such as Alcohol-Based Hand Sanitizers (ABHS), foams or gels, or surgical hand antisepsis. For many reasons, alcohol hand sanitizers as disinfectants are demanded moreover handwashing with soap and water⁵⁰. Their ease of availability, no need for water or plumbing, and their proven effectiveness in reducing microbial load are the reason behind the preference⁵¹. According to the World Health Organization (WHO), an alcohol-containing preparation (liquid, gel, or foam) is designed for application to the hands to inactivate microorganisms and temporarily suppress their growth⁵². Viability is additionally exceptionally subject to the procedure of utilization of the liquor hand sanitizer. One must apply the item to the palm and rub the item everywhere on over the surfaces of two hands until they are dry⁵³. High-quality hygienic hand disinfection cannot be achieved within 15 seconds, it requires 30-second application time as ABHS has recommended. Thirty seconds is a long time to wait before proceeding with the activity. It is the same time as washing with soap and water⁵⁴. The use of alcohol-based hand sanitizers has greatly increased compliance to hand hygiene in healthcare settings. They are efficient, accessible, and take relatively little time to use. Even though they have demerits like dryness of skin, they are a better antimicrobial agent than standard soap and water cleansing⁵⁵. In the absence of a vaccine or effective antiviral drugs, hand hygiene may be a mainstay of efforts to stop the spread of severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2), the virus that causes COVID-19. Alcohol sanitizers are used outside healthcare facilities and also in industries because they are effective at killing microorganisms better than just soap and water. There are several formulas of alcohol sanitizers that are available as gel, foam, or liquid. All healthcare workers can use alcohol sanitizers regularly and should educate the public about their benefits⁵⁶. Alcohol-based hand sanitizer can kill most non-spore-forming bacteria within seconds. Al-

cohol sanitizers are effective against viruses and may reduce transmission of Coronavirus⁵⁷.

Social distancing

Many countries have taken unprecedented measures to prevent social contact and to slow down the spread of the virus, such as closing schools, shops, and restaurants, prohibiting public events, and stimulating or imposing working from home. These measures include “social distancing”, and are especially efficient for diseases (such as COVID-19) which are transmitted by respiratory droplets and require certain proximity of people⁵⁸. Social distancing measures have important effects on activity participation⁵⁹. A lot of people are temporarily unemployed or work from home, and most out-of-home activities are cancelled. As a result, travel demand decreases⁶⁰. COVID-19 outbreak has major implications on international travel, this viewpoint focuses on daily travel patterns⁶¹. People might avoid public transport as these can be considered a breeding ground for viruses and places where it might be difficult to avoid contact with other passengers⁶². As a result of social distancing, travel demand might drop due to an increased amount of working from home, e-learning, and a reduced number of public activities and events⁶³. Since people often plan and perform out-of-home activities in order to maintain or enhance well-being, reduced activity participation as a result of social distancing can negatively affect subjective well-being⁶⁴. Social distancing measures have clear direct positive effects on health, as they are implemented to avoid people getting infected by the COVID-19 virus⁶⁵. The viability and cultural effect of isolation and social separation will rely upon the validity of general well-being specialists, political pioneers, and establishments. It is significant that approach producers keep up the open’s trust through the utilization of proof-based mediations and completely straightforward, actuality based correspondence⁶⁶.

nCOV Transmission

Coronavirus is a large circle of relatives of viruses that are seen in many specific species of animals including camels, cattle, cats, and bats⁶⁷. Rarely animal coronavirus can infect human beings and then unfold between people like MERS and SARS^{68,69}. CDC considers this as a very extreme public fitness threat, primarily based on present-day information, that instant fitness change from 2019-nCov to the overall American public is taken into consideration right now⁷⁰.

Symptoms

Patients with COVID-19 have the most common symptoms of fever, dry cough, and tiredness. Serious symptoms of difficulty in breathing or shortness of breath and loss of speech or movement are also recorded^{71,72}. On average it takes 5-6 days from when somebody is contaminated with the infection for manifestations to show⁷³. The incubation period is estimated to be between 5- 14 days.

Treatment

According to the World Health Organization, there are no specific vaccines or medicines for COVID-19⁷⁴. Treatments are under investigation and will be tested through clinical trials⁷⁵. Antibiotics aren't effective against viral infections such as COVID-19⁷⁶. Treatment is directed at relieving symptoms and may include pain relievers (acetaminophen) cough syrup, rest, and fluid intake⁷⁷. There is no evidence that ibuprofen or Non-steroidal anti-inflammatory drugs (NSAIDs) need to be avoided⁹.

Future scope

To maintain healthy life and surroundings, measures such as social distancing, hand sanitizing, covering your mouth while coughing should be strictly followed and awareness should be brought to the general public regarding the consequences of improper maintaining poor health in order to safeguard themselves from future endemic diseases.

CONCLUSION

This review is necessary as of now since the prevalence of COVID-19 in public places is important. The mortality rate seems to be high in the case of COVID-19 when compared to other pandemic issues. The only way to control is to prevent and control the spread, by following the precautions. Studies exploring prevention and control measures have begun to gradually increase and these are needed to minimize the impact of the outbreak. In the future, following these precautionary measures will help not only in saving lives from present disease-causing viruses but can also help in eradicating further viruses.

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