



**REVIEW ARTICLE**

**Community Medicine**

**WEARING FACE MASKS FOR COVID-19 PANDEMIC: FROM MEDICAL TRADITION TO COMMUNITY PRACTICE**

**KEY WORDS:** Corona virus, COVID-19, Face mask, Infection control, Public health, Social distancing, Pandemic prevention

<b>Dr. Neha Singh*</b>	Senior Scientist, Virology lab, Department of Microbiology, Pt. JNM Medical College, Raipur, Chhattisgarh, India-492001. *Corresponding Author
<b>Dr. Kamlesh Jain</b>	Professor, Department of Community Medicine, Pt. JNM Medical College, Raipur, Chhattisgarh, India-492001.
<b>Dr. Shilpa Jain</b>	Assistant Professor, Government Dental College, Raipur, Chhattisgarh, India-492001.

**ABSTRACT**

Different forms of face coverings used by the public, like masks, gamchas, shields etc., are now widely recommended as source control during the COVID-19 pandemic. Significant debates about the general community use of face masks for guard against coronavirus disease 2019 (COVID-19) stemmed from differing views expressed by health authorities. We believe that the stigmatization and misconceptions about the use of face masks may delay the containment of the COVID-19 pandemic. The leading narrative driving policy, has observed face coverings as a medical intervention and evaluated its efficiency from an infection control perspective. We recommend that public officials and governments strongly encourage extensive use of face masks in public including the use of appropriate regulation. Face masks should not only measure as medical tools but as a community practice to reduce transmission of respiratory infections such as COVID-19.

**INTRODUCTION:**

Masks have been recommended as a potential tool to tackle the COVID19 pandemic since the initial outbreak in China, as primary route of transmission of COVID-19 is mainly via respiratory droplets, and is known to be transmissible from symptomatic or asymptomatic individuals<sup>1</sup>. There are disputes about whether face masks should be used have framed them primarily as a medical tool with welfares and harms. Though the various countries and public health agencies now recommend or mandate face masks against covid-19, observing face masks through a medical narrative still dominate<sup>2,4</sup>. Face covering is a public health measure projected to capture respiratory droplets from the wearer, who may not have symptoms, to reduce transmission of respiratory infections<sup>5</sup>. People have been practice the term "medical mask" to state a device that happen to meet certain standards and is intended primarily for healthcare workers but may also be recommended for the community. Usually, the term "face mask" denotes to a loose-fitting, can be disposable or reusable (after washing or proper sanitization) tool that maintain a physical barrier between the mouth and nose of the wearer and possible contaminants in the immediate surroundings<sup>4</sup>. It can be homemade or commercially sold coverings (usually made of cloth, but sometimes from paper or other materials) intended primarily for the public health. Different nations opted for diverse approaches as covid-19 spread. For example, China and South Korea, United States, Canada, Germany, France, UK, Russia and Italy, India have promptly increased production of medical masks for use by the community, whereas some countries were initial adopters of cloth face coverings to preserve supplies of medical masks for health workers<sup>6</sup>. The majority of evidence specifies that wearing mask decreases the transmissibility per interaction by reducing transmission of infected droplets in equally research laboratory and medical contexts. Community mask wearing is extreme effective at reducing spread of the virus when compliance is high. The decreased transmissibility could substantially reduce the death toll and economic impact while the cost of the intervention is low<sup>5-6</sup>. And therefore policymakers need urgent recommendation on the mandate usage of masks by the over-all population as a tool in combating SARS-CoV2, the respiratory virus that causes COVID-19<sup>7</sup>.

pertaining to the effectiveness of wearing mask to mitigate against viral transmission and other infectious agents that opportunistically use the oropharyngeal or nasopharyngeal route as the main orifice for disease spread<sup>8</sup>. Mask wearing by infected persons will reduce environmental contamination and transmission, at home or in health care facilities. Putting mask by people at work place will lower the risk of outbreaks in organizations and essential services. If the wearing of masks gives a false sense of security then so too are the actions of washing hands, using hand-sanitizers, wearing hand gloves, and even the practice of social distancing. The fact is that no single preventive action clutches the golden key in disease prevention within the perspective of proper infection control. Each single practice contributes meaningfully to the process and complements other in disease control. As per, infectious disease expert and senior scholar at the Johns Hopkins Center for Health Security, Amesh A. Adalja, MD, "Face masks can help protect against many respiratory infections that are spread through the droplet route, and that comprises coronavirus and the flu." Speaking to the basis of this recommendation, Dr. Adalja stated that viruses such as the corona virus can spread from an infected person to others through the air by coughing and sneezing or by touching a contaminated superficial and after that touching your mouth, nose, or eyes prior to washing your hands. When a face mask is worn, one can prevent those respiratory droplets from coming into contact with one's face or mouth before dropping to the ground<sup>9</sup>. Hypothetically, if everyone wears a mask during all person-to-person contact, the progressive decrease in the number of new infections in successive generations would eventually bring the pandemic down<sup>8-9</sup>. Appropriate mass wearing of masks would support to maximise the effect of social distancing in dropping down the exponential growth of the epidemic and allow adequate time to strengthen our health care facilities and salvage countless lives. The denial to wear masks to complement social distancing is illogical when countries are prepared to accept a far more extreme measure such as lockdown. Coming up persistently to adopt mask wearing only when we are ready to re-open for business is not an option, as protracted lockdown is devastating to the global economy<sup>10</sup>.

**THE SIGNIFICANCE OF WEARING FACE MASKS:**

There has been a lot of deliberation on whether masks should be worn or not worn over this COVID-19 situation. This piece of information will hopefully describe any misunderstanding

**FACE MASK AS AN INFECTION CONTROLLER TOOL:**

A face cover is either personal protective equipment to shield the wearer or a means of source to prevent the spread of illness. Manufacturing of infection control wearing stuff is subject to stringent quality standards with distribution and obtaining classically organised on a national level. Almost all

randomised measured trials of face coverings have been done in healthcare facilities and addressed their efficacy in protecting the wearer from infection, not as source control<sup>12</sup>. A trial of assessing face coverings as source control is that the individuals in the trial were not those in whom the outcome would need to be measured<sup>10</sup>. This medical tale includes anxieties about the public not being able to use face coverings safely. Standardisation in making, using, and cleaning face coverings at population level is challenging when people have access to massively different resources. In such situations, making the duty of putting on and taking off a face covering feel problematic and hazardous risks making it more difficult to implement<sup>11</sup>.

**COMMUNITY PRACTICE:**

In the existing wide-reaching pandemic, there are examples of face coverings adapting to cultural traditions. In India, a loose end of a cloth piece, from a saree, or a loose piece of cloth, a “dupatta,” has become most commonly used tool to cover the face during covid-19. It has been believed that face masks may also be observed in practical terms as defense against pollution, dust, pollen, or wildfires<sup>11- 12</sup>. Face masks have been associated with assuming a varied identity (worn by a superhero), hiding recognition and persecution (worn by a criminal), to display modesty (expected of women in some cultures), having a communicable disease (worn by a patient) and for cultural rituals and processions (worn by some people who are celebrating). Cloth face masks are usually characterised by personalisation and a bottom-up approach to manufacturing and distribution. It can be homebased such as made from an existing piece of clothing or purchased from a marketplace for convenience, to display a brand or to match an outfit. Public health policy must consider the trade-off between efficacy and compliance that a face covering that is 100% effective at preventing transmission but only worn by 10% of the population will have less impact than one that is 50% effective but worn by 95% of the population<sup>13</sup>. In order to minimize risk, individuals are required to follow accepted infection control practices. Apart from hand hygiene, one of the infection control measures is the routine practice of a face mask. Almost all countries currently using face masks in their pandemic plans. Face mask works by providing a physical barrier between the mouth and nose of the wearer and potential contaminants in the immediate environment<sup>14</sup>.

**SHIFTING THE NARRATIVE:**

Throughout the covid-19 pandemic, wearing face masks is being promptly announced as a public health intervention in all nations with no social tradition of doing so. For successful acceptance, such involvements need to be grounded in the social and cultural practices and realities of affected communities should not only inform, but also take some effort to shape new sociocultural standards (table 1).

S.N.	Topic	Medical Traditional	Community practice
1	Attention and memorandum	Single wearer: protect yourself and in doing so, you may also protect others	Community: Protect others and they will also protect you
2	Objective	Risk reduction: reducing or eliminating risk of infection to the wearer	Population advantage: dropping the overall level of transmission on population level
3	Decide on	Role: confirm that the face masks meets specific filtration and routine standards	Acceptability: pick a face mask that is easy to wear and buy. Purpose to use one with three layers, but a face mask with

			fewer layers is also a good exercise than wearing no face mask.
4	Putting on, taking off, and wearisome	Infection control: monitor strict practice of donning and doffing. Avoid self-contamination by touching your face mask. Discard your mask after a specified time period or when there is visible soiling or damage	Ease and hygiene: make sure that it shields your mouth and nose and is comfortable to wear without repeatedly adjusting it. Change your face mask if it becomes dirty. Keep a practice of wearing a fresh face mask daily
5	Cleaning	Store and sanitization: store soiled mask according to strict procedures. Sanitize or wash the face covering according to define protocols.	Decontaminating: take out your face mask or covering once you reach home and put it in the washing. Clean it with your other clothes
6	Connecting to others	Keep away from risk: do not share your face mask with others	Encourage benefit: keep encouraging your friends, family, and susceptible members of society have face coverings too, through community making and promoting schemes
7	Environmental apprehensions	Cautious discarding: discarded disposable face masks in open are an environmental hazard; they must be correctly discarded in accordance with regulations	Sustainability: individuals may have two or three reusable face coverings that can be washed and used again, which could reduce costs to the user and avoid waste

In the beginning of the covid-19 pandemic, there are a small number of reports that Some public figures, counting the president of the United States, initially denied to wear a face covering, showing wearing a mask as a symbol of weakness and denying to wear a mask as an allegation of authority<sup>16</sup>. In the United States, mandating of face masks has been understood as a breach of public rights and autonomy, with critics using the term “muzzle” to show dehumanisation of the individual by the state<sup>15</sup>. Public of Asian ethnicity were stigmatised in the United Kingdom for wearing face masks, as if they were transporters of infection who threatened the safety of others<sup>16</sup>. For success of practice wearing mask by community, undesirable depictions of the social meaning and ethical worth of face coverings essential to be aggressively reframed and assumed that the main purpose of face masks by the community is a basis of infection control<sup>17</sup>.

**CONCLUSIONS:**

It can be concluded that during such outbreak, medical masks or appropriate homemade masks (and if medical mask not available), should be universally worn when keeping physical distance is not possible. Collectively with other IPC

measures, wearing mask will upturn community protection and empowerment. Homebased masks furthermore contribute to freeing-up resources and more effective equipment that should be absolutely reserved to health-care and other workers at uppermost risk. Expanded debates about face coverings as a medical intrusion have delayed application of a valuable preventive tool. Presently, most countries have shifted to support face coverings to prevent transmission of covid-19, we must also move the focus to implementation. Instead of continuing to debate technical specifications and efficacy, sociocultural framings should be exposed to encourage their use. This can be done by emphasising underlying values such as unity and public safety. Such actions are likely to improve the acceptance of face coverings and help control the devastating influence of the pandemic. Additional research may help to identify even more effective, safe, available, affordable, and sustainable community level solutions.

**REFERENCES**

1. Adhikari, S., Meng, S, Wu, Y., Mao, Y.P., Ye, R.X., Wang, Q.Z., et al. "Epidemiology, causes, clinical manifestation and diagnosis, prevention and control of coronavirus disease (COVID-19) during the early outbreak period- A scoping review" *Infect Dis Poverty* 2020, 9-29.
2. World Health Organization. Advice on the use of masks in the context of COVID-19: interim guidance-2. 2020. <https://apps.who.int/iris/handle/10665/332293>
3. Rutter, H., Wolpert, M., Greenhalgh, T., Managing uncertainty in the covid-19 era. *BMJ Opinion* 2020 Jul 22. <https://blogs.bmj.com/bmj/2020/07/22/managing-uncertainty-in-the-covid-19-era/>
4. Centres for Disease Control and Prevention. Recommendation regarding the use of cloth face coverings, especially in areas of significant community-based transmission. 2020. <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cloth-face-cover.html>.
5. Cabinet Office United Kingdom. Guidance: Staying safe outside your home. Coronavirus (covid-19) guidance and support (2020). <https://www.gov.uk/government/publications/staying-safe-outsideyour-home/staying-safe-outside-your-home>.
6. Dry, S., Leach, M., Epidemic narratives, "Science, Governance, and Social Justice". London, Washington: Routledge; 2010, 1-21.
7. Fischer, W.A., Weber, D., Wohl, D. A., Personal protective equipment: Protecting health care providers in an ebola outbreak. *Clin Ther*, 2015 (37), 2402-10.
8. Q, Wang., C, Yu., Letter to editor: Role of masks/respirator protection against 2019-novel coronavirus (COVID-19). *Infect. Control. & Hosp. Epidemiol.*, 2019, 1-7
9. S, Feng., et al., "Rational use of face masks in the COVID-19 pandemic. *The Lancet Respir. Medicine*" 2020.
10. Greenhalgh, T., "Face coverings for the public: laying straw men to rest". *J Eval Clin Pract* 2020 (26), 1070-7
11. Sim, S.W., Moey, K.S., Tan, N.C., "The use of face masks to prevent respiratory infection: A literature review in the context of the health belief model". *Singapore Med J*, 2014 (55), 160-7.
12. Jindal, S.K., Aggarwal, A.N., Christopher, D.J., Dhar, R., Jindal, A., "Cloth face covers—a sustainable measure to mitigate COVID-19". *Int J Tuberc Lung Dis* 2020. <https://www.theunion.org/news-centre/news/cloth-face-covers-a-sustainable-measure-to-mitigate-covid-19>
13. World Health Organization. Advice on the use of masks in the context of COVID-19: interim guidance-1. 2020. <https://apps.who.int/iris/handle/10665/331693>
14. Hansstein, F.V., Echeagaray, F., "Exploring motivations behind pollution-mask use in a sample of young adults in urban China. *Global Health*". 2018, 14-122. doi:10.1186/s12992-018-0441-y pmid:30514342
15. MacFarquhar, N., "Who's enforcing mask rules? Often retail workers, and they're getting hurt" *New York Times* 2020. <https://www.nytimes.com/2020/05/15/us/coronavirus-masks-violence.html?auth=login-email&login=email>.
16. Xio, Z., Henley, W., Boyle, C., Gao, Y., Dillon, J., "The face mask and the embodiment of stigma" *PsyArXiv* 2020. <https://psyarxiv.com/tp7z8/>
17. Burgess, A., Horii, M., "Risk ritual and health responsibilisation: Japan's 'safety blanket' of surgical face mask-wearing". *Social Health Illn* 2012 (34), 1184-98. doi:10.1111/j.1467-9566.2012.01466.pmid:22443378