Inappropriate use and disposal of face masks may promote the spread of COVID-19 in Bangladesh

Md Hafizur Rahman[1]

Dear Editor,
Following the spread of the COVID-19 pandemic, caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), many countries are taking preventive actions based on scientific information and applicability at the local level. The key strategic goals of COVID-19 control efforts are to delay or interrupt the transmission of SARS-CoV-2 and wearing masks both in congregated and open places is a recommended measure to obstruct the transfer of droplets and aerosols and reduce hand-to-face contact. Acknowledging the threat posed by this pandemic, an increasing number of countries have made face masks compulsory to wear outside the home, with citizens risking potential penalties if they are spotted without one[1]. The use of face masks has also become ubiquitous in Bangladesh.

As a precautionary measure against COVID-19, the government of Bangladesh has made the wearing of a face mask outside their homes mandatory for all its citizens[2]. Throughout the course of the COVID-19 outbreak in Bangladesh, wearing a mask has been recommended in crowded places such as restaurants, educational institutions, places of worship, offices and shopping malls etc., or in comparatively enclosed situations such as in vehicles for transportation. WHO, as well as the Directorate General of Health Services (DGHS), Bangladesh, emphasized that wearing face masks will only be effective in preventing COVID-19 spread when they are properly worn and discarded, and when mask-wearing is coupled with other prevention actions including appropriate hand hygiene and physical distancing[3]. The DGHS also issued new guidance on the manufacturing and appropriate use of fabric masks and suggested that fabric masks are to be used by the general public while N95 respirators are reserved for healthcare workers[4].

Ironically, the face mask is being misused by people in Bangladesh. N95 respirators are commonly used by the general population for non-medical uses, however, these types of respirators are not available in hospitals in adequate numbers[5]. The media in Bangladesh have been publishing pictures of people wearing face masks on their chins or neck, without covering their mouth and nose, or merely covering their mouth with their nose exposed. People who use face masks are usually observed to pull their masks down to their chins to speak and then drag them back over their mouth and nose after speaking. People are often found to touch the top part of the mask in an attempt to adjust it, remove it or to scratch their face as an automatic reflex. Many people use the same mask over an extended period of time, even when it is damp or spoiled.

Despite the mandatory use of masks in Bangladesh, people are reportedly circulating without wearing a mask. It has been reported that in Kutupalong, the largest refugee camp in the world with around 0.66 million Rohingya refugees, people gather along the market area without a mask[6]. A survey conducted by a popular daily newspaper reported that around 63% of citizens in Bangladesh wear masks, while in the Dhaka division, the hardest hit in the country by the COVID-19 pandemic, the propotion was the lowest at 53%[7]. Besides, several types of masks of questionable effectiveness are being sold at markets and tried on by people before making a purchase[8].

In addition, citizens are disposing face masks inappropriately, especially in the capital city, Dhaka. After using these protective masks, people in the household put them in a polythene bag. They then put these bags together with other household waste in the garbage van, which is mainly managed by workers employed by city corporations and non-governmental organizations, thus creating potential health risks to waste-disposal staff[9]. Newspapers in Bangladesh are flooded with reports of citizens discarding

masks at random, in places such as roads, footpaths, hospital areas, and police stations[10]. Rivers in the country are the ultimate destination of these inappropriately disposed of masks, which is another aspect of environmental pollution. The Environment and Social Development Organization (ESDO) reported that, from 26 March 2020 to 28 April 2020, the country has generated as waste a total of about 2000 tons of surgical gloves and masks[11]. Such poorly disposed of mask-waste causes significant environmental pollution that can pose as a serious risk in the spreading SARS-CoV-2, an unintended public health issue as well as a possible source of re-emerging infectious disease.

Bangladesh was already grappling with inadequate medical-waste management and hygiene practices before the COVID-19 disease outbreak[12]. Now the growing prevalence of misuse and improper disposal of face masks is a matter of concern for the government of Bangladesh. There are also issues relating to a false sense of protection by the compulsory usage of masks that could cause people to disregard other prevention measures. Face masks may become an emerging means for the transmission of COVID-19 pandemic in Bangladesh, considering the potential risk of self-infection and environmental hazard when the masks are incorrectly disposed of or used. For implementing public face-mask policies, the government should consider local attributes, required resources, viability, stability, risks, and benefits-based strategies. Policy and regulation will also require the introduction of standardized usage and disposal of face masks. In addition, the government should take immediate actions to promote public awareness and behavioral change related to standardized usage and disposal of face masks, to mitigate the threat of the pandemic.

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