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## Letter to the editor

## Discarded Covid 19 gear: A looming threat



The current outbreak of Covid19 heralds a public health emergency of global concern. The individuals afflicted with Covid19 have created a black swan event [1], strangling the economy. The race against the novel coronavirus has gained traction with the government on a knife-edge to crush the curve by implementing social distancing; the only vaccination currently to curb its spread.

The virus has rejuvenated Nature, while the human activity was at a standstill due to the global lockdown. Epidemiologists are now concerned about the Covid19 protective gear that are in a surplus production but maybe indecorously disposed and may spark an additional epidemic “plastic plague”. Face mask are a complement and can be synergised with the use of other non pharmacological measures such as social distancing, self quarantine, Hand hygiene to halt the community transmission. Face mask have a dual role of source control and primary prevention. Face masks are the new social norm but they must be worn with responsibility rather than discarding them in the streets or as a household garbage. The influx of Covid19 trash (jettisoned gloves and masks) worn by the general public may hinder contact tracing and can be a viable petridish for the virus to sustain and flourish. The biomedical waste disintegrates into microplastics to get swept into the ocean. WWF reports estimate 10 million masks per month disposed to the environment if even 1% of the masks are disposed of incorrectly. An average 4gm mask shielding a 120 nm size virus [2] can lead to the dispersion of over 40 thousand kilograms of plastic in nature, a pre-carious ecological cataclysm that must be diffused to sustain life.

A recent study from University College London’s Plastic Waste Innovation Hub has cited a single-use face mask each day for a year would generate 66,000 tonnes of contaminated plastic waste [3]. Dry waste collection centers are inundated with discarded gloves and varieties of masks which may harbor the virus even after they are casually disposed of. The US Centres for disease control and prevention recommends the general public use washable masks, made from natural fabrics that are more breathable for extended use, however Filtering efficacy of a cloth mask in trapping the aerosols and microdroplets is yet to be validated in a clinical trial [4]. Surgical masks (N95), respirators are recommended for health care practitioners in direct contact with Covid19 patients. Evidence-based research on the duration of protection of face masks for this specific virion, measures to prolong the life of disposable masks, and the supply of reusable masks particularly for frontline healthcare workers should be encouraged [5].

A bulk of infectious waste during the COVID 19 outbreak is anticipated to increase, particularly through the use of Personal protective

equipment. The mayhem caused by Covid 19 has brought about a substantial change by adopting a robust infection control practices in a health care setting while the pitfall is an easy access to the safety gears by the general public who are yet to be sensitised of its safe disposal. A triad of vigilant well-informed community on how to rationally use ‘safety gear’, doctors and strict reinforcement of safe handling of the heap of biomedical waste must be undertaken to stem the repercussions of this unprecedented crisis.

## Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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