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Managing hazardous, toxic by-products during a pandemic

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COVID-19 waste has further strained the already stressed waste management system of the country

Waste and its disposal are considered as one of the biggest modern-day issues affecting our world. Millions of tonnes of waste are generated every year around the world, with India contributing as much as 15,000 tonnes of solid waste per day. With over 377 million people residing in Tier I and II cities, around 62 million tonnes of municipal solid waste is collected every year. An estimated half of this waste is collected by municipal corporations, of which only 30 per cent is treated in waste management plants. What is most concerning is that a large portion of the waste accumulated daily consists of medical waste which is hazardous and toxic.

Over the last year and a half, as countries battled the worst pandemic seen in more than a century, the amount of biomedical waste generated every day increased significantly. While the impact of the pandemic is becoming more manageable with large scale inoculations being undertaken, the large quantity of biomedical waste that gets generated has brought its own set of unique issues – these we can say are the 'by-products of managing the pandemic'.

The biggest of these 'by-products' is the disposal of the huge waste accumulated in the country. One can easily spot used masks, face shields and surgical gloves dumped as a part of household waste or behind hospitals and other healthcare facilities. In a recent response to a question in the Upper House of the Parliament, the former Minister of State for Environment Babul Supriyo stated that India was generating almost 146 tonnes of COVID-related biomedical waste per day. This figure peaked on May 10 2021, when the daily waste reached 230 tonnes.

This waste is generated from three main sources-

1. Diagnosis of COVID-19 through IVD kits, collection instruments, processing instruments, etc.
2. Infection prevention and quarantine through masks, gloves, sanitisers, etc.
3. Treatment of the COVID-19 patients using PPE kits and disposable instruments

Covid waste has further strained the already stressed waste management system of the country. While the Central Pollution Control Board (CPCB) claims that our ability to segregate and dispose of waste is getting better, global data shows that the capabilities are not improving fast enough. Globally, some countries are showing improvement while others still have a long way to go.

How is medical waste treated?

Bio-medical waste is segregated by colour coding according to its categories. These are Yellow (masks, plaster of Paris, caps, etc), Red (syringes, IV sets, gloves, urine/blood bags, etc.), White (needles, blades, scalpels, etc.) and Blue (all glassware, broken or intact, vials, etc.). As per the current guidelines, all the biomedical waste must be treated at designated disposal centres called Common Bio-medical Waste Treatment and Disposal Facility (CBWTF). If such a facility is not available (as is the case for states like Goa, Mizoram, Sikkim and a few others), hospitals have to install a treatment facility of their own. There are an estimated 13,000 such facilities installed in the country.

Due to the highly contagious nature of this coronavirus variant, the extensive usage of protective equipment has led to even more waste. Cities like Mumbai and Pune had to resort to burying the waste in rural areas (a less than an ideal solution); such was the amount of waste being produced.

How to improve waste management apparatus:

The 8 per cent shrink in budgetary allocation for waste management in the current financial year by the Ministry of Environment, Forest and Climate Change failed to encourage our efforts in managing waste. Although there are plans to increase the number of CBWTFs to better manage waste collection; however, much more needs to be done to get to the root of the issue. A 360-degree awareness campaign is needed to sensitize the public and businesses of the importance of better waste management and teach mechanisms to segregate waste.

We may also look at the tested and successful methods that are being followed by countries like the US and across Europe. Data shows that the US has been able to reduce its medical waste over the last few years despite an American producing eight times the waste an Indian produces. Similarly, most European countries can segregate their waste efficiently, enabling better disposal.

However, awareness is only the first step. For safe disposal of waste, we must ensure that all waste disposable generators are registered with covid management authorities. This will secure safe segregation of bio-medical waste in all the waste generators present in hospitals and enable tracking of the quantity of waste so that it can be disposed of safely.

Even before covid struck, the country’s waste management set-up was in dire need of an upgrade. Now that we have further increased the hospital beds capacity (from 6,31,222 on April 20 to 7,60,100 on Jan-21), the medical waste management needs urgent focus to cater to the waste generating from increased bed capacities and so that we are adequately prepared for the third covid wave if it comes.

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