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Editorial**Medical Waste Management in Bangladesh**

Md. Abdul Mazid*

Medical waste is a threat to global public environmental health, especially in the lower-middle-income countries such as Bangladesh. As different health concerns compete for limited resources in these countries. Medical waste management remains a less-prioritized activity of the healthcare facilities. Population growth, rapid urbanization, mushrooming of private healthcare facilities, and increasing use of disposable medical equipment are other factors contributing to this burden.¹ Globally, 1 out of 3 and, in Bangladesh, 9 out of 10 hospitals lack basic medical waste management services.²

In Bangladesh, there are around 700 government hospitals and 5000 private hospitals and clinics with 150,000 beds in total, all of which lead to the generation of huge amounts of medical waste. The average medical waste generation rate is 1.63–1.99 kg per bed per day in the capital of Bangladesh.³ This poorly managed waste poses a large environmental threat and might create a prolonged and unwanted public health hazard and be a potential source of re-emerging infection. In Bangladesh, despite the introduction of the Medical Waste Management and Processing Rules in 2008, no safe system has yet been developed to manage the health-care waste generated daily in hospitals, clinics, and households.

In Bangladesh, hospital waste is mainly managed by city corporations, third-party organizations, and non-governmental organizations. Waste generated inside Bangladeshi hospitals is often collected

without any separation by untrained, unprotected, and unaware cleaners, and disposed of in unauthorized places without any separation or proper treatment.⁴

Medical Waste of different subtypes (Infectious waste, Pathological waste, Pharmaceutical waste, Genotoxic waste, Chemical waste, Wastes with high content of heavy metals, Pressurized containers, Radioactive waste and Sharps) can be categorized as non-hazardous and hazardous waste; 75–90% of Medical Wastes are non-hazardous but the remaining 10–25% contain pathogenic microorganisms and toxic chemicals requiring special treatment to mitigate the environmental and health risks.^{5,6} If the hazardous wastes are dumped with other wastes without proper treatment, the entire waste stream become a potential source of infection. The unsafe disposal of medical wastes increase the possibility of transmitting hepatitis B and C, HIV and other blood-borne diseases.^{7,8,9}

Medical waste are preserved in different colored container before disposed-off. Black container for General waste includes kitchen waste, medicine box, Yellow container for Infectious waste includes cotton bandage, amputated body parts, placenta, blood & urine bags, Green container for Plastic waste includes Syringe without needle, saline bags, gloves, Red container for Sharp items (needle, blade, knife, vial, ampoule), and Blue container for Liquid waste.¹⁰ Medical waste are disposed-off by different disposal system (Sold, Burned, Buried, Dumped or Destroyed).¹¹

The growth of the medical sector around the world including Bangladesh is rapidly growing over the last decade combined with an increase in the use of disposable cheap medical products of different

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category has contributed to the large amount of medical waste. Therefore, it is necessary to focus on the medical waste management system throughout the country from urban to rural level. A policy-level paradigm shift into a strategic, state-of-the-art medical waste management system is required.

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