



Global Health Hazards Arising from Unpredictable Surges in Medical Waste

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DESCRIPTION

Waste disposal refers to the removal, dumping, recycling, or destruction of undesired materials, often known as waste, that are created by industrial, domestic, or agricultural goods. When appropriate waste disposal procedures are implemented, our environment will be less polluted and also be reducing. Numerous legitimate concerns that endanger both human and animal health have been raised by the world's rapid population growth and the rise in pandemic diseases that has accompanied it. One of these issues is the disposal of substantial amounts of medical waste generated by hospitals, labs, and healthcare facilities. One of the most significant difficulties facing healthcare facilities around the world is the difficulty of efficiently managing the medical waste produced by their activities.

Due to the contagious nature of medical waste, improper disposal of a wide range of hazardous materials, such as old needles and personal protective equipment, may be extremely damaging. The improper disposal of medical waste poses a serious risk to society and could hasten the spread of a number of pandemic diseases. Due to the numerous criteria and possibilities, a medical waste method selection problem might be categorized as a Multi Criteria Decision Making MCDM kind of problem. On the other hand, specialists who assess these issues are limited to evaluating the qualitative criteria linguistically. Fuzzy logic can be utilized to deal with the ambiguity in these verbal phrases while MCDM approaches permit turning these evaluations into a numerical format.

Infectious illnesses are spread by medical waste, syringes, scalpels, bandages, blooded cotton, and body parts. Furthermore, a significant portion of it involves risky compounds, such as radioactive, poisonous, and cancer-causing substances. According to WHO, medical waste should be gathered, stored, and disposed of separately from household and industrial wastes due to the hazards and dangers it poses. Medical wastes are not recyclable, thus when they are gathered with household and

industrial garbage, they effectively render these wastes as well. Humans, other assets, and the environment may suffer irreparable damage as a result of medical waste. Additionally, it is advised that each form of medical waste be collected separately, since each one carries a unique set of risks and threats that, if ignored, might significantly increase the overall risks. Furthermore, improper Healthcare Waste Management (HWM) procedures can exacerbate the problem in underdeveloped countries, offering even larger risks to the long-term sustainability of the environment and to public health.

Still, the primary cause of serious infections is healthcare waste. Injuries to the respiratory system, complications with the central nervous system, harm to the reproductive system, and mutagenic and carcinogenic issues are just a few of the major health issues that dangerous medical waste can bring about. According to a report issued by the WHO, contaminated syringes were to blame for at least 260,000 cases of the human immunodeficiency virus (HIV), 2 million cases of hepatitis C, and 21 million cases of hepatitis B. Diarrhea, leptospirosis, typhoid, cholera, and tuberculosis are other serious illnesses that can be brought on by hazardous medical wastes. Each year, 2.5 million people pass away from infectious diseases brought on by poor waste management techniques. Despite the fact that these statistics and government data are upsetting, they are important in that they highlight the deadly risks of medical waste.

CONCLUSION

For physical, chemical, and biological causes, wastes have a negative impact on the environment and human health; therefore, systematic waste management implementation is definitely required. By reducing the overall waste produced by healthcare procedures, cleaner production aims to reduce the use of natural resources. Additionally, it focuses on using more environmentally friendly technology to stop waste accumulation at the source. The issue of choosing the best technique for disposing of medical waste is dealt with, and a novel decision-making methodology for the healthcare business is devised.

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