SWOT Analysis of Bio Medical Waste Management in Palghar district Maharashtra, India

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Abstract

Biomedical waste management (BMWM) in India is crucial for safeguarding public health and the environment, particularly with the expanding healthcare infrastructure. The rising volume of biomedical waste, including hazardous materials from medical treatments and diagnostics, poses significant risks if not managed appropriately. In India, the Bio-Medical Waste Management Rules, 2016, along with amendments, provide a comprehensive regulatory framework for segregation, collection, treatment, and disposal. Despite these regulations, challenges such as infrastructure deficiencies, lack of awareness, and compliance issues persist, especially in rural and smaller healthcare settings. Palghar district of Maharashtra in India, with a population of 3 million, faces similar challenges. The district's healthcare infrastructure includes 46 government PHCs, 450 private hospitals, and numerous clinics, all contributing to substantial biomedical waste generation. The district's primary treatment facility, operated by Touch N Glow, offers an essential service for waste collection and disposal, ensuring compliance with regulatory standards. However, issues such as inadequate infrastructure in rural areas, low compliance in smaller facilities, and gaps in knowledge among healthcare workers remain. This paper explores the current state of BMWM in Palghar, its challenges, and opportunities for improvement, including technological integration, infrastructure expansion, and public-private partnerships. Effective implementation of the regulatory framework, alongside enhanced community engagement and education, is vital for sustainable waste management and minimizing environmental and health risks.

Keywords

Biomedical waste management, waste segregation, public health, environmental protection, opportunities for improvement, technological integration, public-private partnerships.

Biography:

Mr. Nilesh Patil has completed his M.Sc in Organic Chemistry at the age of 22 years from Mumbai University and M.Phil in Natural Resource Management from Indian Institute of Forest Management (IIFM) Bhopal . He is certified Lead Auditor -ISO 14001(EMS) from TUV India. He is the partner of M/s. Touch N Glow, a Common Bio Medical Waste Disposal Facility authorized by Maharashtra Pollution Control Board since 2004. He is member of International Solid Waste Association (ISWA), Solid Waste Association of North America (SWANA), Air & Waste Management Association (AWMA).

About Research Topic

The research focuses on biomedical waste (BMW) management in Palghar district, Maharashtra, where improper waste handling poses health and environmental risks. Despite the Bio-Medical Waste Management Rules, 2016, challenges such as inadequate infrastructure, low compliance, and lack of awareness persist, especially in rural and smaller healthcare facilities. Palghar, with 46 government PHCs and 450 private hospitals, generates significant BMW. The Touch N Glow facility helps manage this waste through processes like incineration and autoclaving. The study emphasizes the need for improved infrastructure, training, and community engagement, alongside opportunities for technological integration and public-private partnerships, to ensure better waste management and protect public health.

About Institution

Touch N Glow is a leading waste management company based in India with over 24 years of diversified experience, specializing in the management of healthcare waste. The company has established itself as a trusted provider of sustainable waste management solutions, catering to a population of 4.1 million residents and more than 4,500 customers, which includes private and government entities, as well as multinational organizations. Touch N Glow's expertise extends to handling municipal solid waste (MSW) projects, ranging from 100 to 800 metric tonnes per day, offering tailored solutions to meet the specific needs of diverse waste generation profiles.

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