

## Defeating the devil in the waste: Remediation of infectious Covid-19 waste

New Delhi, Aug 17: Pictures of Covid-19 waste floating in sea and rivers or scattered outside garbage bins, with stray animals carrying masks in their mouths are in circulation on social media.



Low-income countries with weak health systems, crowded megacities and large populations of impoverished people are facing a huge challenge to dispose of Covid-19 biomedical waste generated every day. Failure to pay attention to the Covid-19 waste management may result in risk of poor outcomes during the pandemic which is far higher among those with comorbidities.

Wastes containing deadly microorganisms, toxins and particularly CoronaVirus are posing a risk of infection relapse and occurrence of future infection waves. Infectious waste originating from health care facilities and research activities produce mass scale single use waste including metal, plastic and glass lab consumables.

Becoming waste wise and controlling the biological risk at the segregation facilities to prevent cross-contamination can help combat Covid-19. Many options for the treatment of biomedical waste are available and should be adopted in such a health crisis.

The methods to be considered include use of chemicals disinfectants such as Sodium hypochlorite, dissolved chlorine dioxide, per-acetic acid, hydrogen peroxide etc. But, most chemical processes are water-intensive and require neutralizing agents. Mechanical processes involving compaction to reduce the volume of waste and shredding to destroy plastic and paper waste to prevent their reuse; irradiation processes exposing waste to ultraviolet or ionizing radiation in an enclosed chamber; and biological processes using enzymes for treating medical waste can also be employed. One needs to understand and segregate the waste first and choose an appropriate method for the waste treatment.

Bio-medical waste management needs committed government backing, good practices followed by both health-care workers and health care facilities, continuous monitoring and strong administration. It is our fundamental right of every citizen to live in a clean and safe environment. Segregation of waste at source and waste reduction should be of prime importance for management. Lack of education, awareness and trained personnel to manage the waste and paucity of the funds available to proper waste management systems are currently causing biggest challenges that the hospital and research centers are facing.

Dr. Pinky Kain of the Department of Biotechnology's Regional Centre for Biotechnology (DBT-RCB), Faridabad, (Principal Investigator, WT DBT IA Intermediate Fellow), published a short communication titled 'Defeating the devil in the waste: Remediation of infectious Covid-19 waste' in Acta Scientific Neurology.

Link to the communication: <https://www.actascientific.com/pdf>

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