



SRISHTI *med waste* UPDATE

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Are disposables actually being disposed after use ?

The answer is *NOT ALWAYS*- as a recent haul by Delhi Police brought into light a gang involved in repackaging of used disposable syringes. Through our surveys we have always reported these types of practices. This not only happens at the ragpicker level, who sort these disposables from hospital waste, but also at the level of hospital staff. The waste is picked up with every shift and the person on duty at that time automatically acquires ownership to the waste and has the right to sell it.

After the news of repackaging racket broke out, the authorities claimed that most of this stuff was coming from outside Delhi. Contrary to this, with over 2,000 nursing homes in Delhi and no treatment options or centralised facility in sight, most of the waste from these places lands up in municipal dumps or directly to recyclers, thus making these illegal practices easier.

The problem with disposables is twofold- First is the issue of reuse and Second is incineration. Incineration of plastic releases deadly carcinogens called Dioxins and Furans.

Following this news in a knee-jerk manner some of the hospitals have begun incineration of disposables contrary to the rules which does not allow this method.

were giving their plastic (after disinfecting and mutilating it) are hesitant to continue with this practice, leading to accumulation of this waste in the hospitals.

The need of the hour is to give due importance to implementation of the Rules and setting up of a centralised facility. Awareness among people about the Rules and the hazards of burning plastic is also of prime importance, to bring about the change in the existing situation.

Technology Watch

Malta

The existing incinerator for managing hospital waste is being replaced by an autoclaving system.

Poland has decided to go in for its third autoclave to treat medical waste.

Hospital installs a microwave- Army Research & Referral Hospital has recently acquired an microwave to treat its medical waste.

New Releases

Minerva Press has recently published a book called "Hospital Waste Management"



written by Dr DB Acharya and Dr Meeta Singh. The book covers various aspects of

medical waste including the present scenario, how to do a survey, conduct training, technology options etc.



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The book is priced at Rs. 500/-. Published by- Minerva Press, A1/304, Safdarjung Enclave, New Delhi-29

Status of medical Waste management in various states

1. Karnataka

- Four Common Waste Treatment facilities are being planned on the outskirts of Bangalore City. These plants will be privatized and twenty proposals have been received for the same.
- Notices have been served to hospitals and clinics that have not sought authorisation. So far only 300 authorizations have been issued in the state. The authorized hospitals have been given a one-year grace period to implement rules. Old ambulances of the State will be converted to haul hospital waste to the regional facilities.

2. Andhra Pradesh

- 1,25,000-hospital bed capacity in the State spread over 23 districts. Cities of Hyderabad, Visakhapatnam and Vijaywada have a population of 30 lakhs and above.
- Three private parties have been granted permission to set Common waste facility.
- Incinerators are not permissible for use within the city limit. Except for large (100-beds and above) hospitals.
- Authorizations as per Bio-medical Rules are being granted without much delays.
- 125-gram of infectious waste per bed per day has been estimated by the PCB.

3. Maharashtra

- Medical Waste awareness is being created by press releases.
- The response for authorization registration is very poor in the State. The authorization fee structure is being reconsidered by PCB, after which it expects good response.

- The Board may induct private agencies for assisting in management of Hospital / Clinic inventories.

The Ministry of Environment has assured not to allow incinerator to be set up and decided to put into place a technical committee, which will evaluate every decision to set up a technology. Incinerator not meeting standards would not be allowed to set up.

Bombay will finally have its first centralized facility to treat 5 Mt of medwaste. It will be set up in GTB Sweri. It would have an incinerator and an autoclave.

4. Chennai

Chennai Municipal Corporation plans to take on the responsibility of collecting hospital waste for treatment and disposal.

5. Bhavnagar

- Municipal Corporation is not involved with Hospital waste.
- Currently two hospitals, including the Civil and the Railway hospital have incinerators.
- Intends to set up a Central Treatment Plant

6. Pune

- 8,000 hospital beds in Pune City.
- 100 bed and above hospitals are permitted to have incinerators.
- Estimated total waste generation is 0.5 kg waste /bed /day
- Estimated infectious waste generation is 0.2 kg waste /bed /day.
- IMA, Pune Association of Hospitals, MPCB and NGO (Bhumata) in co-operation with the Municipal Corporation are setting up a Central Treatment Plant. PMC would provide the land at the existing crematoria grounds, and also the incinerator. The collection, treatment, storage and disposal cost worked out is Rs. 20/- per kg. A private contractor will operate the plant, hospitals would make payments to Pune MC.

- The Scheme will be in operation by June end.

7. **Aurangabad**

Plans for low cost system. Steam Sterilisation of waste being considered.

- It was suggested that the Pollution Control Board should licence Municipal Corporation to be the Prescribed authority as required under the rules.

8. **West Bengal**

- 208 hospitals having total bed strength of 25,000
- Specially designed waste vehicles, moved around by tractors.
- Personnel safety gears provided.
- Task force at each institute.
- Waste disposal sanitary landfill pits constructed with PCB consent.
- Medical Waste Tracking and Documentation system in operation.
- 10% Bleach solution used for laboratory glass slides and vials.
- World Bank has stated that it will not fund incinerator cost.
- Continuous waste minimization programme. Procurement practices to control waste reduction.
- Practice of selling of placenta is gradually being discontinued.
- Study estimates generation rates to be 541 gm / bed/ day for large hospitals having more than 500 beds, and, 241 gm / bed / day for small hospitals having more than 30 beds.
- Patients oriented to waste disposal.
- Signboards in local language
- Training programmes are in place.
- Monthly reports on waste management are in place.

Abstract of presentations at ISHA seminar by Dr. Homi Mullan

Deadline Extended



In an amendment made to the Bio- Medical Waste Rules, Schedule VI has been replaced by a new one and these rules may be called as the Bio- Medical Waste (Management & Handling) (Amendment) Rules, 2000. The deadlines for compliance for the first two categories of hospitals, which was earlier '31st December 1999 or earlier' has been extended to '30th June 2000 or earlier'. The rest of the schedule remains the same.

Hyderabad Scenario:

APPCB (Andhra Pradesh Pollution Control Board) is leading on the medical waste front. The status of the authorizations is- Applications : 480. Granted : 139. APPCB plans to grant another 35 by the end of this month.

Common waste facilities- One more common waste facility has been given Consent for Establishment (CFE) for Vizag - M/s Millenium Environmental Technologies. This takes the total number of common waste facilities to 3 in the state, 2 in Hyderabad and 1 in Vizag. Meanwhile one more facility has started operations in Vijaywada without either a CFE or any knowledge of the PCB. As far as Hyderabad is concerned Medicare Incin has already begun test runs. The company has already tied up with 80-90 private HCEs and wants to launch services formally on the 5th of June. GJ Multiclave's facility is also ready and they have also started test runs. Both the facilities offer transport, treatment and disposal of BMW @Rs. 2/- per bed per day. (This includes both BMW & Gen waste)

Jyotsna Chauhan, JCA , Hyderabad

8 of 10 medical waste incinerators in Mumbai are unsafe

Of the ten medical waste incinerators in Mumbai, as many as eight flout the guidelines laid down by the Union ministry of Environment and Forests.

This was revealed by the findings of a survey carried out by the Mumbai Medwaste Action Group (MMAG). It also reported high levels of dangerous heavy metals specially lead, cadmium and zinc in the ash. Most of the incinerators were found to have less than the stipulated two chambers and lacked the requisite provision of pollution control devices and in most of the cases the chimney stack height was too low. Some incinerators are also situated very close to residential areas.

Maharashtra Pollution Control Board (MPCB), the Prescribed Authority in the state says that it does not have the facilities or the manpower to carry out the task of monitoring.

In almost all the cases surveyed, it was found that all kinds of waste was being indiscriminately burnt, including paper, glass, body tissue and syringes.

Kajal Mehta, MMAG, Mumbai

Events

The Indian Society of Health Administrators (ISHA) organized the second national **Seminar on Hospital & Clinical waste, Hazards Management, and Infection Control** from 12-15 of April 2000 in Bangalore. The seminar was attended by hospital administrators, doctors, representatives from Municipal Corporations, Pollution Control Boards and NGOs.

The various waste related issues focussed were:

- a) Generation and Segregation
- b) Collection & Transportation
- c) Education of Staff
- d) Treatment and Disposal models

Recommendations and Findings:

1. Waste to be treated and disposed is in the region of 200g/bed/day.
2. Paper bags option to plastic bags is a viable solution.
3. There is resistance from the hospitals for seeking authorisation for Bio- Medical Waste Management and Handling Rules. The fee structure described by the states needs to be based on the bed strength.
4. Communication between PCB and hospital authorities needs to be on friendly note. More authorisations need to be issued quickly by PCBs.
5. West Bengal Health System Development Project (WBHSDP) has a scheme for rural and urban health centers. Low cost approach using traditional ways of landfill and rural transportation mixed with cautious approach of evaluating technology solutions.
6. Jehangir Hospital has shown the profitable way to manage waste by Vermin-culture.
7. National Standards and extended Guarantees from manufacturers of available technologies are desired.
8. Training of staff at all levels.
9. Occupational health hazards too needs greater study. Workers need to be provided with safety gears.
10. Hazardous and Toxic chemicals inventory has to be carried out. Stock level needs to be reduced. Alternative less toxic chemical replacements needs to be tried out.
11. Cost of waste treatment at CTP range from Rs.2 per kg. in Hyderabad to Rs.20 per kg in Pune.

12. Indian needle stick injuries figures- Sharps injury 36 times/year/Nurse
13. Just "4 grams" of Mercury can contaminate "1,000,000,000 (One billion) US Gallons of water".
14. More coordination needs to be between the Pollution Control Boards and the municipal bodies for a smooth functioning of the entire system.
16. Every one agreed with the health hazards caused by operation of incineration and thus suggested Centralised treatment facilities with a combination of technologies, which would help in minimizing pollution.

and oversee scientific research for further development. With this important aspect in mind, Indian Society of Hospital Waste Management was formed and has been registered under Societies Registration Act XXI of 1860 with Registration Number 36939.

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Workshop in Hyderabad & Chennai

A workshop on Bio-Medical Waste Management was held by TNPCB (Tamil Nadu Pollution Control Board) in association with USAEP on 25th April 2000 in Chennai and on 27th and 28th April in Hyderabad by APPCB. where Ms Helen Yanulis spoke about waste minimization and toxicity and William Pickard spoke about disposal technologies. Both the speakers were from Lightning Environmental Recovery Systems Inc, USA.

On 27th April, a round table discussion was organised by CRE at APPCB which had speakers from APPCB Mr. Nagarjuna (EO Secretary, Health and member Govt. Core Committee hospitals, Members of APNA, (JCA), US-AEP and common treatment facility owners.

Formation of Indian Society of Hospital Waste Management

With the Rules coming into enforcement Hospital waste management would form an integral part of any medical institution's working. Thus the need of having an All India Organisation/ Society comprising of expert/ specialists from various disciplines involved in Hospital Waste Management was felt, which would provide conceptual guidance