

## The Waste Quantification and Treatment facility in various Health Care establishments in Srinagar

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### ABSTRACT

*The Quantity of bio medical waste generated per bed per day on an average is about 1.50kgs. Waste bins provided in hospitals are insufficient, devoid of color coding and open type. Segregation of wastes is carried out in none of the health care establishments. Health care establishments which do not have ETP's/ septic tanks are soakage pits, located near water bodies discharge their liquid wastes into them. The hospital solid wastes are generally disposed by uncontrolled open dumping. Incinerators are not properly run and maintained. Open dumping of solid wastes in some hospitals is practiced.*

**Keywords:** Dumping, ETP's, incinerators, kg, Septic tank, waste.

### I. INTRODUCTION

The problem of environmental pollution coupled with the unhealthy and unscientific disposal of waste from hospitals, nursing homes and laboratories are issues of increasing concern as these infectious wastes can transmit diseases and put to risk of those who handle such wastes or live nearby. Also the nature of biomedical waste is changing very sharply due to the use of new drugs for treating various ailments. During last few decades the need for better health care has been felt globally, and Srinagar is no exception to it to cater to the needs and demands of the increasing population, a rapid mushrooming of hospitals both in Govt. and private sector has been felt consequently, there has been a proportionate increase in the question of waste generated by these health care centers.

Though between 75-90% of the waste produced by the health care institutions is non sick being generated from administrative and housekeeping maintenance of health care establishment. The remaining 10-25% waste is regarded as hazardous and may create a variety of health risks.

### II. CATEGORIZATION OF BIOMEDICAL WASTE

The biomedical wastes are categorized into groups, which are able to specific treatments/disposal methods are:-

1. Human anatomical waste
2. Animal waste

3. Microbiological and biotechnology waste
4. Waste sharps
5. Discarded Medicines and cyto toxic drugs
6. Solid waste
7. Soiled waste
8. Incineration ash
9. Liquid waste
10. Chemical waste

### **III.MATERIALS AND METHODS**

The methodology adopted in the preparation of report on the biomedical waste management includes:

- Data collection
- Data processing
- Assumptions and limitations
- Statistical methods like mean, standard deviation etc.

### **IV.RESULTS AND DISCUSSIONS**

The waste generated from any hospital or health care establishment is of varying nature, in which around 85% of waste generated is non hazardous, 10% is infectious (hence hazardous) and remaining 5% is non infectious but hazardous (chemical, pharmaceutical and radioactive waste). The quantum of waste generated depends upon type of health problem hospital policies and practices and type of care being provided. In this regard studies were carried out in Srinagar to assess the quantum of waste generated by various hospital or health care establishments. The studies revealed that biomedical waste generated (by hospital ,nursing homes) per bed per day on an average is about 1.5 kgs.

In Srinagar, only a few treatment facilities exist at present that too in private hospitals/nursing homes, Govt. run hospitals, generating biomedical waste are ill equipped to deal with such wastes.

On the whole, Srinagar situation regarding treatment of biomedical wastes is improving in private sector. Keeping in view lack of technique, low financial constraints of smaller health care establishment for treating their wastes, a common incinerator plant has been installed at Lasjan, which will not only cover treatment problems of small health care establishment apart from generating revenue and creating employment opportunities. The equipments mostly used in Srinagar includes a few incinerators, S.T.P.S, small sized autoclaves and needle destroyers.

S.no.	Name of Health care Establishment	No. of Beds	Quantity of Solid waste produced (kg/day)	Main Treatment Facilities
1	SMHS Hospital Karanagar	750	1500	Incinerator, Autoclave
2	SKIMS, Soura	500	2000	Incinerator, Autoclave
3	L.D Hospital, WazirBagh	500	1000	Incinerator, Autoclave
4	Chest Diseases Hospital, Dalgate	350	200	Incinerator, Autoclave
5	Govt. Gousia Hospital, Khanyar	20	1.5	Autoclave
6	Khanam's Hospital Hazuribagh	30	7	Autoclave, Needle cutter
7	Ramzan Hospital, Gogibagh	20	7	Autoclave, Needle cutter
8	Modern Hospital, Rajbagh	45	18	Autoclave, Needle cutter
9	MehmoodaShaheen Medical Trust Hospital, Tulsibagh	35	0.2	Incinerator, Autoclave, Needle cutter

10	Govt. Dental College Hospital, Kakasarai	10	35	Autoclave
11	Mubarak Nursing Home, AbiGuzar	10	205	Autoclave, Needle cutter
12	Care Hospital and Urology Centre, Bemina	10	2.6	Autoclave, Needle cutter
13	RatnaRani Hospital, Bar Bar Shah	8	5	Autoclave, Needle cutter
14	Govt. Allopathic Dispensary, Batamallo	2	2	Autoclave
15	Govt. Health center, SR Gunj	5	15	Autoclave.

Unscientifically heated liquid waste goes wholly/partially into the rivers and lakes creating great nuisance which badly affects the local population. The major portions of the population in various areas are utilizing the same water for the requirement and mostly the children are becoming the major victims of various dreadful diseases. The root cause of this water pollution is non availability of STP and soakage pits. Before discharging the liquid waste into the drains, proper scientific treatment of the liquid waste is necessary.

The table given shows complete details regarding waste quantification and treatment facility in various health care establishments.

Source: Pollution Control Board Srinagar

## V.CONCLUSION

The present study was done to evaluate the practices of Bio- medical waste management amongst different healthcare centres in Srinagar city(India). It was found that more emphasis needed to be laid on 'mutilation' of recyclable waste and disinfection of waste by proper management practices.

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