
COVID-19

CONCERNS & CHALLENGES -

CBWTFs

Dr. SHARAFUDHEEN
Secretary, IMAGE - CBWTF, KERALA

Consultant ENT Surgeon
H.O.D., Dept. of ENT & Head & Neck Surgery
EMS Memorial Co-operative Hospital, Perinthalmanna, Kerala

IMAGE – CBWTF

COMMON BIOMEDICAL WASTE TREATMENT FACILITY

Kanjikode, Palakkad, **Kerala**





IMAGE – CBWTF

COMMON BIOMEDICAL WASTE TREATMENT FACILITY

Kanjikode, Palakkad, Kerala

IMAGE is the Prestigious Project of Indian Medical Association, (IMA KSB), developed for the scientific management of Biomedical Waste generated from HCEs in Kerala

IMAGE Commenced operation in **2004**.
Presently the Largest CBWTF in India
The only CBWTF for the entire state of Kerala

COVID-19 **CONCERNS & CHALLENGES** in Biomedical Waste Management

- 1. Increasing Quantity of the Biomedical Waste**
- 2. Altered Quality of the Biomedical Waste**
- 3. Frequent Maintenance of Treatment & Monitoring Equipment**
- 4. Increased Expenses for the Covid Waste Management**
- 5. Environmental Concerns**
6. CPCB Covid BM Waste Tracking Mobile App (COVID19BWM)
7. Effect on the Recycling Sector
8. Safety of Waste Handlers
9. Collection – related issues
10. Transportation - related issues
11. Space Constraints in the CBWTFs for the reception & storage of Covid Waste
12. Increased Workload related to the Documentation

BM WASTE MANAGEMENT – IMAGE Experience

Pre - Covid	15,727 HCEs	48.4 TPD (Total BMW Quantity)	350 Gm Per Patient Bed
COVID-19	15,727 HCEs	30 TPD	450 Gm Per Patient Bed
	580 HCEs*	25 TPD	1 Kg Per Active Case
	16,307 HCEs	55 TPD (↑14%)	

COVID-19 CONCERNS & CHALLENGES in Biomedical Waste Management

Increasing Quantity of Biomedical Waste

- Increasing No. of Covid-19 Cases, being cared in the HCEs
- Increased use of PPEs in the care of Covid cases
- **Mixing of Solid waste** with Biomedical waste
- **Non-BMW** (PPEs used by Public) – sent along with BMW

Kg of Covid Waste/Covid Case per Day
(Pre-Covid: 250 - 350 gms / Bed / Day)

↑ 14 %

Capacity Modification of the CBW

biggest challenge to be considered for
effective management of this additional
biomedical waste

COVID-19 CONCERNS & CHALLENGES in Biomedical Waste Management

Altered Quality of Biomedical Waste

Improper Segregation

- Plastic containing materials
- Food Waste & Food Packaging
- General Solid Waste

Higher Calorific Value of Biomedical Waste Mix *

Regular BMW Mix	= 3,000 – 4,000 kcal/Kg	(12 – 16,000 KJ)
PPEs / Plastics (60-65%)	= 8,000 – 9,000 kcal/Kg	(34 – 37,000 KJ)

 Tremendous Heat  Quantity of Incineration  Particulate Matter

COVID-19 **CONCERNS & CHALLENGES** in Biomedical Waste Management

Frequent **Maintenance** of Treatment Equipment
&
Monitoring Devices at CBWTF

COVID-19 CONCERNS & CHALLENGES in Biomedical Waste Management

Increased Expenses for the Covid Waste Management

- Additional **Separate Vehicles** for Covid Waste Collection
- Increased use of **PPEs & Disinfectants**
- Additional **Pool of Workers** for the collection, transportation & plant operation
- Extra payments / **Risk Allowances** to the workers
- High **Repair & Maintenance cost** of Incinerators / Vehicles

COVID-19 CONCERNS & CHALLENGES in Biomedical Waste Management

Environmental Concerns

- Efficiency of APCD (Air Pollution Control Devices) of Incinerators
- Incineration of Plastic / Semi-plastic PPEs
- Nitrile Gloves (Synthetic Acrylonitrile Butadiene Gloves)
- Incineration of Materials disinfected with Chlorinated Chemicals

COVID-19 **CONCERNS & CHALLENGES** in Biomedical Waste Management

CPCB Covid BM Waste Tracking Mobile App
(COVID19BWM)

COVID-19 **CONCERNS & CHALLENGES** in Biomedical Waste Management

Recyclable Waste Scrap
&
Effect on the **Recycling** Sector

COVID-19 CONCERNS & CHALLENGES in Biomedical Waste Management

Safety of Workers



COVID-19 **CONCERNS & CHALLENGES** in Biomedical Waste Management

Covid Waste - **Collection** - Issues

COVID-19 **CONCERNS & CHALLENGES** in Biomedical Waste **Management**

Covid Waste - Transportation - Issues

COVID-19 **CONCERNS & CHALLENGES** in Biomedical Waste Management

Space Constraints in the CBWTF
for the reception & storage of Covid Waste

COVID-19 **CONCERNS & CHALLENGES** in Biomedical Waste **Management**

Increased Workload related to
Documentation & Reporting

IMAGE – IS OUR RESPONSIBILITY TO THE SOCIETY



www.imageima.org

*“Let the waste of the s
contaminate the liv
healthy”*