

National Policy Workshop Webinar Series
On
Countermeasures for Riverine and Marine Plastic Litter in India
12 -22 May 2020

Session 5: Impact of COVID-19 on plastics consumption, innovation, logistics and waste generation (including PPEs and wastes from Health Care Facilities) and related challenges

***Provisions for Managing COVID-19 wastes
as per CPCB guidelines***

Lalit S Kamde
Asst Director
NPC, Hyderabad

Contents

- **BMW Rules 2016- BMW Segregation as per Schedule-1**
- **Guidelines for Handling , treatment and Disposal of COVID-19 Waste**
- (1) COVID-19 Isolation Wards**
- (2) Sample collection Centers/ Laboratories for COVID-19**
- (3) Quarantine Camps / Home care for COVID-19 suspected patients**
- (4) Non-quarantined homes**
 - **Standard Practices for Disposal of Used Masks & Gloves**
 - **Impact of COVID-19 on Plastic waste generation**
 - **Minimize the Waste Generation due to Face Masks**
 - **Suggestions, Recommendations and Discussions**

BMW Segregation as per Schedule-1

Anatomical waste, chemical waste, soiled waste, chemotherapy waste, discarded linen and medicines and laboratory waste



Contaminated plastic waste



Glass waste and metallic implants



Metal sharps



Guidelines for Handling , treatment and Disposal of COVID-19 Waste

(1) COVID-19 Isolation Wards

- Keep separate color coded Bins/ Bags/ Containers as per Schedule -1 of Bio Medical Waste Management Rules 2016.
- Double layered bags to be used for collection of waste
- Dedicated collection Bin labeled as “COVID-19” to be kept separately in Temporary storage room and lifted directly from ward into CBWTF collection Van
- Mandatory labelling , bags/ containers used as “COVID-19 Waste”
- Maintain separate record of waste Generated from COVID-19 isolation wards
- Containers/ bins/ trolleys should be disinfected with 1% Sodium Hypochlorite solution
- Report opening /operation of COVID-19 ward to SPCBs
- Feces and excreta in diaper from COVID-19 patients should be placed in Yellow Bag.

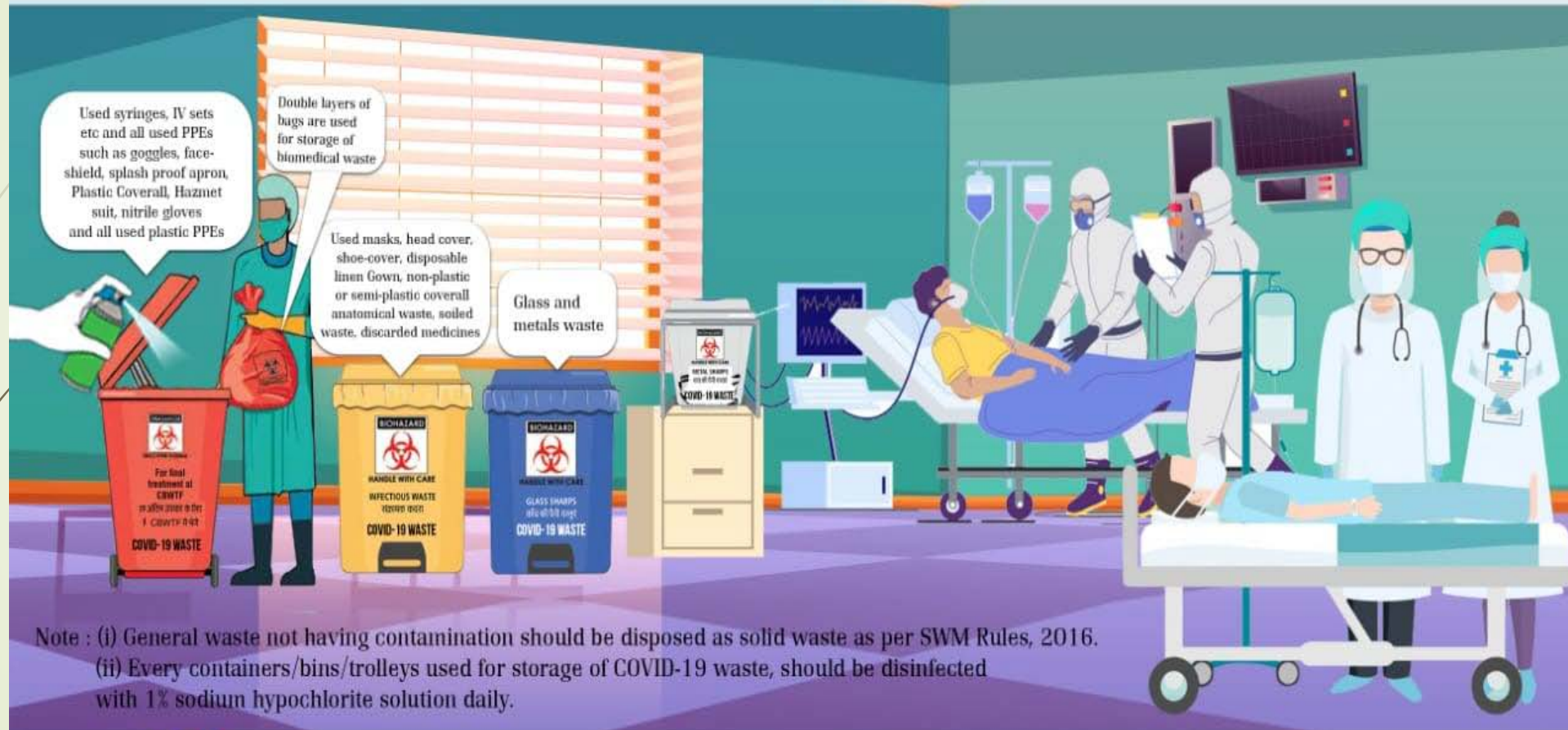
Guidelines for Handling , treatment and Disposal of COVID-19 Waste contd.....

- Collect used **PPEs like goggles, face shield, Splash proof apron, hazmet suit, Nitrile gloves** into Red bag
- Collect used **masks, head cover/cap, disposable linen Gown** in Yellow Bag



(2) Sample collection Centers/ Laboratories for COVID-19

- Report opening /operation of COVID-19 sample collection centers and Laboratories to SPCBs
- Guidelines for COVID-19 Isolation Wards should be applied
- Pre treat **viral transport media, Plastic Vials, Vacutainers, eppendorf tubes, plastic cryovials, pipette tips** and collect in Red bags

Biomedical Waste Management in COVID-19 Isolation Ward



Note : (i) General waste not having contamination should be disposed as solid waste as per SWM Rules, 2016.
(ii) Every containers/bins/trolleys used for storage of COVID-19 waste, should be disinfected with 1% sodium hypochlorite solution daily.

Follow us on  

www.cpcb.nic.in

Guidelines for Handling , treatment and Disposal of COVID-19 Waste contd.....

(3) Quarantine Camps / Home care for COVID-19 suspected patients

- General solid waste as per SWM rules 2016 and BMW generated to be collected in Yellow colour Bags and Bins
- Quarantine Camps Shall inform CBWTF as and when the waste is generated for collection and disposal
- In case Home care , to be handed over in Yellow Bags to authorized waste collectors (ULB will engage CBWTF to pick up from houses)
- Used **masks and gloves** to be kept in paper bag for minimum 72 hrs prior to disposal as general waste. (cut the masks to prevent reuse)

(4) Duties of Common Biomedical Waste Treatment Facility

- Ensure regular sanitation of workers involved in Handling and collection of Bio Medical Waste and provide adequate PPE's including **three layer masks, Splash proof aprons, nitrile gloves, gum boots and safety goggles**

Guidelines for Handling , treatment and Disposal of COVID-19 Waste contd.....

- Use dedicated vehicle to collect COVID-19 ward waste and vehicle should be sanitized with sodium Hypochlorite after every trip
- COVID-19 waste should be disposed off immediately upon receipt at Facility.

(5) Management of Wastewater from HCFs or Isolation Ward

- Agencies / HCFs operating STPs should continue to ensure Disinfection of treated wastewater as per prevailing practices to inactivate corona viruses
- Operators of ETPs/STPs should adopt standard operating practices and wear PPEs
- During the period of COVID-19 pandemic, utilization of treated wastewater in utilities within HCFs may be avoided

Standard Practices for Disposal of Used Masks & Gloves

- ▶ A public advisory issued by the GCC on April 11, says residents from **quarantined houses** must hand over the used masks, gloves and other waste to the sanitary workers of GCC separately in a yellow bag on a daily basis. It will be sent to the bio-medical waste processing facility centers and also to the incinerator maintained by the GCC. Yellow bags will be provided to the quarantined homes.
- ▶ To dispose of masks, gloves from **non-quarantined homes**, residents are requested to disinfect the used mask and gloves using ordinary bleach solution (5%) or sodium hypochlorite solution (1%) and wrap the same in a separate wrapper and keep it in a closed bin before handing it over to the sanitary worker. The note adds that this waste will be treated as domestic hazardous waste and will be incinerated safely by GCC.

Impact of COVID-19 on Plastic waste generation

- **Surgical face masks** are made with **non Woven Fabric**, which has better bacteria filtration and Air permeability while remaining less slippery than woven cloth. The material most commonly used to make them is **polypropylene** (type of **plastic**) either 20 -25 gsm in density.
- **N95 respirator** –made of **polypropylene** material
- **Spunbond-Meltblown-Spunbond (SMS)** is one such material made of **Polypropylene** and at present, mainly used in medical and health protection products such as surgical clothing, surgical caps, protective clothing,.



Impact of COVID-19 on plastic waste generation

- Plastic to the Rescue of COVID-19 today , **may be the pollution Tomorrow.**

(COVID-19 needs a host to survive – it can survive on a plastic for 72 hours)

- **Discarded masks and gloves** are becoming a **health hazards** as people dump them on streets, public places and water bodies (**Marine and Riverine Plastic Litter**)

(Different plastic materials release micro particles which are nearly invisible to the naked eye. When they enter marine ecosystems it is impossible to clean them out and they enter food chains. Fishes are now found to contains micro plastics to high levels.)



Minimize the Waste Generation due to Face Masks:

Cloth Face Coverings for Use by the General Public

The Centers for Disease Control and Prevention (CDC) recommends that members of the public use simple cloth face coverings when in a public setting to slow the spread of the virus.

CDC always recommends everyday preventive actions, such as hand washing and maintaining at least 6 feet of social distancing, to help prevent the spread of respiratory diseases.

Surgical Masks (Face Masks)

A surgical mask is a loose-fitting, disposable device that creates a physical barrier between the mouth and nose of the wearer and potential contaminants in the immediate environment. To be used by persons caring for sick persons with respiratory infections and symptoms as cough, sneezing and fever, and health care and frontline workers. Surgical masks are not intended to be used more than once.

N95 Respirators Not for Use by the General Public

The Centers for Disease Control and Prevention (CDC) does not recommend that the general public wear N95 respirators to protect themselves from respiratory diseases, including corona virus (COVID-19). It must continue to be reserved for health care workers and other medical first responders.

Surgical masks and surgical N95 respirators should not be shared or reused. To safely discard your mask, place it in a plastic bag and put it in the trash. Wash your hands after handling the used mask.

WHEN TO USE A MASK

For healthy people wear a mask only if you are taking care of a person with suspected 2019-nCoV infection

Wear a mask, if you are coughing or sneezing

Masks are effective only when used in combination with frequent hand-cleaning with alcohol-based hand rub or soap and water

If you wear a mask then you must know how to use it and dispose of it properly



World Health
Organization



Reuse

Cloth mask – Can be properly washed, disinfected, dried and reused.

Surgical mask – If it's dry and the layers and shape are intact, put it in a zip lock pouch with a desiccated gel. The gel absorbs moisture and keeps the mask dry. If the mask is intact and not torn, it can be reused for 3 days. If it's worn by an infected person, it should never be reused or shared.

N95 respirator –When reusing the N95 respirator, leave a used mask in the dry atmosphere for 3-4 days to dry it out. Polypropylene in N95 is hydrophobic and contains zero moisture. COVID-19 needs a host to survive – it can survive on plastic for 72 hours. Follow the guidelines provided by the manufacturer or use it maximum up to 5 times.

Source :

[Know about proper usage, disposal & reuse of mask ...
www.narayanahealth.org > blog > know-about-proper-](https://www.narayanahealth.org/blog/know-about-proper-usage-disposal-reuse-of-mask/)

Suggestions, Recommendations and Discussions

- We need to minimize the loss to the Environment by Developing Robust System for Collection and Disposal of Plastic waste due to COVID-19 at HCF and ULB level
- Capacity building of ULBs and HCWs for in depth understanding of COVID-19 wastes and the associated consequences on ecology and human health.
- Need of Public awareness on Proper Disposal of Face Masks and Hazards associated with it
- Implementation of Guidelines for Handling , treatment and Disposal of COVID-19 Waste, though stricter Inspection and Audits
- Inventorization of COVID-19 waste Generation for CBWTF capacity Building

National Productivity Council

Thank You!



Q&A



Ls.kamde@npcindia.gov.in
hyderabad@npcindia.gov.in



+91-9860439586
+91-040-24733473



Provisions for Managing COVID-19 wastes as per CPCB guidelines