

**DINSHA PATEL COLLEGE OF NURSING
NADIAD**

F.Y.B.SC. NURSING (2017-18)

Lesson Plan

SUBJECT:- Nursing Foundation

TOPIC:- Bio Medical Waste Management

Prepared By:-

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DPCN

GENERAL OBJECTIVE:-

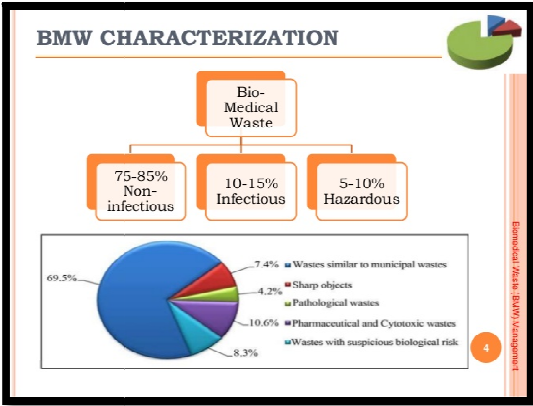
At the end of this lecture students will be able to understand the different waste and how its been segregated with its transportation and its proper disposal.

SPECIFIC OBJECTIVE:-

THE STUDENTS WILL BE ABLE TO.....

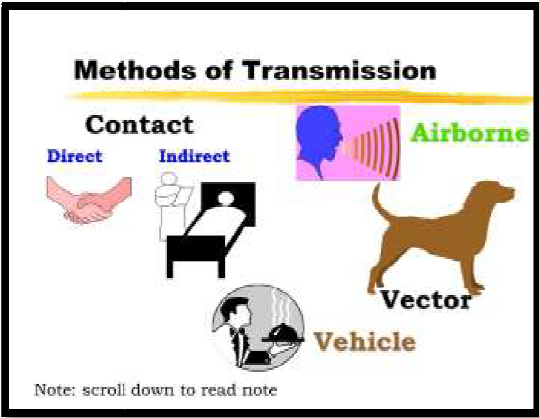
- Understand the introduction related to bio medical waste management
- Identify the areas who generates the bio medical waste
- Enlist the different categories of the bio medical waste management
- Classify the different classification of the bio medical waste management
- Categorise the personals at risk for exposure to the infectious waste
- Identify the route of transmission of the infections
- Initiate the precautions in care of preventing the infection to spared form one person to another
- Differentiate the categories of the BMW
- Verbalise the different steps of the Effective BMW management
- Segregate the waste according to its category
- Store the BMW according to its category
- Maintain the documentation of the waste and about its pre treatment

Sr No	Time	Objectives	Content	Teaching Learning Activity	AV Aids	Evaluation
1	5min	Understand the introduction related to bio medical waste management	<p>Introduction :-</p> <p>It is defined as “any waste, which is generated during the diagnosis, treatment or immunization of human beings or animals or research activities pertaining thereto or in the production or testing of biological or in health camps, including the categories mentioned in Schedule I appended to BMW rules 2016”</p> <p>“Any solid and/or liquid waste including its container and any intermediate product, which is generated during the diagnosis, treatment or immunization of human beings or animals”.</p>	Lecture cum discussion	AV Aids, PPT, Charts , Videos, Posters, Demonstration,	What do you mean bio medical waste management?
2	5 min	Identify the areas who generates the bio medical waste	<p>Bio-Medical Waste generated by</p> <ul style="list-style-type: none"> • Hospitals • Nursing Homes • Clinics • Dispensaries • Veterinary Institutes/Animal Houses 	Lecture cum discussion	AV Aids, PPT, Charts , Videos, Posters, Demonstration,	Which are the different areas that generates the bio medical waste?


Sr No	Time	Objectives	Content	Teaching Learning Activity	AV Aids	Evaluation
3	5 min	Enlist the different categories of the bio medical waste management	<ul style="list-style-type: none"> • Pathological Laboratories • Blood Banks/Blood Donation Campus • Ayush Hospitals • Clinical Establishment • Research/Educational Institute/Research Labs • Health Camp • Medical or Surgical Camps • Vaccination Camps • Blood Donation Camps • First Aid Rooms of Schools • Forensic Laboratories <p>BMW CHARACTERIZATION</p> 	Lecture cum discussion	AV Aids, PPT, Charts , Videos, Posters, Demonstration,	What the different categories of BMW?

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4	5 min	Classify the different classification of the bio medical waste management	<p>Classification of BMW</p> <p>Non-Hazardous Waste</p> <ul style="list-style-type: none"> • Biodegradabl • Non biodegradable <p>Potentially Infectious Waste</p> <ul style="list-style-type: none"> • Dressings, • swabs, • laboratory • wastes, • instrument • s used in • patient • care.. <p>Potentially Toxic Waste</p> <ul style="list-style-type: none"> • Radioactive • Chemical • Pharmaceutical 	Lecture cum discussion	AV Aids, PPT, Charts , Videos, Posters, Demonstration,	What are the different classification of the BMW?


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5	5 min	Categorise the personals at risk for exposure to the infectious waste	<p>CATEGORIES OF PERSONS EXPOSED TO RISK OF INFECTION</p> <p>HEALTH HAZARDS</p> <ul style="list-style-type: none"> • Risk of HIV & HBV • Nosocomial infections • Others. 	Lecture cum discussion	AV Aids, PPT, Charts , Videos, Posters, Demonstration,	Who comes in direct contact with the infectious waste?


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6	5 min	Identify the route of transmission of the infections	<p>ROUTES OF TRANSMISSION</p> <ul style="list-style-type: none"> • Inhalation of dust particles containing germs • By ingestion (contaminated unwashed hands, contaminated food stuffs, water etc) • Intact or non intact skin, mucous membranes 	Lecture cum discussion	AV Aids, PPT, Charts , Videos, Posters, Demonstration,	What are the different modes of infection transmission?


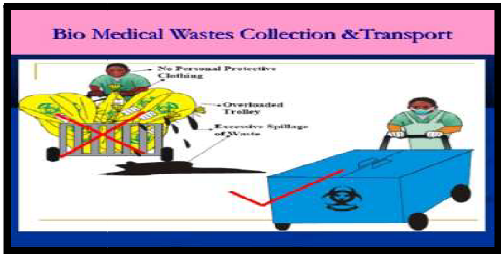
Sr No	Time	Objectives	Content	Teaching Learning Activity	AV Aids	Evaluation
7	5 min	Initiate the precautions in care of preventing the infection to spread from one person to another	<p>PRECAUTIONS</p> <ul style="list-style-type: none"> • Medical, Paramedical & Sanitation staff should be vaccinated against Hepatitis B • Using heavy duty gloves especially while dealing with infectious wastes • Recapping needles should be discouraged. In case, if unavoidable single handed method should be used • Segregation of Biomedical Waste & Safe disposal • All necessary compliance in accordance with BMW (Management) Rules 2016 to avoid unwanted occurrence. <p>ENVIRONMENT LEGISLATION</p> <ul style="list-style-type: none"> • The Air (Prevention and Control of Pollution) Act, 1981 • The Water (Prevention and Control of Pollution) Act, 1974 • The Environment (Protection) Act, 1986 	Lecture cum discussion	AV Aids, PPT, Charts , Videos, Posters, Demonstration,	What are the steps of precaution to be taken in preventing the infection?


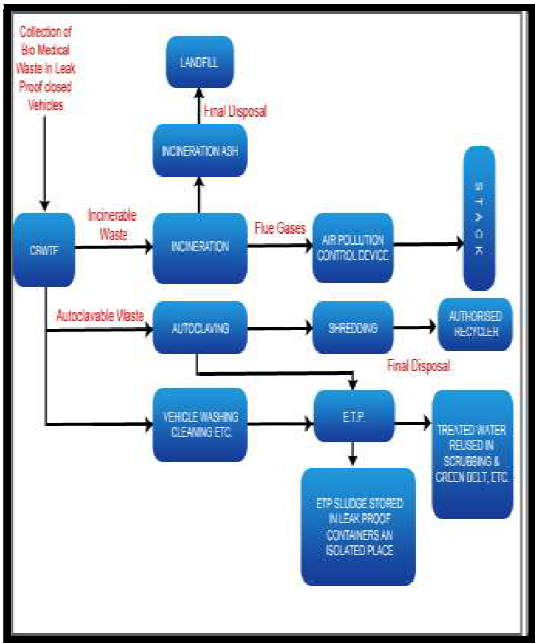
Sr No	Time	Objectives	Content	Teaching Learning Activity	AV Aids	Evaluation
8	5 min	Differentiate the categories of the BMW	<ul style="list-style-type: none"> The Hazardous Waste (Management & Handling) Rules, 2016 The National Environmental Tribunal Act, 1995 The Biomedical Waste (Management) Rules, 2016 The Municipal Solid Waste (Management & Handling) Rules, 2000 The E-Waste (Management) Rules, 2016 <p>CATEGORIES OF BMW</p> 	Lecture cum discussion	AV Aids, PPT, Charts , Videos, Posters, Demonstration,	How BMW is been categorised?

Sr No	Time	Objectives	Content	Teaching Learning Activity	AV Aids	Evaluation
9	5 min	Verbalise the different steps of the Effective BMW management	<p>Steps of effective BMW Management</p> <pre> graph TD A[Generator (HOSPITALS)] --> B[In House Segregation (Collection, Segregation Packing in Color Coded Poly Bags)] B --> C[Common Storage Point At Hospitals] C --> D[Transportation (Approved Special Vehicle)] D --> E[Unloading and Temp Storage at CBWTF] E --> F[Treatment (Incineration, Autoclaving and Shredding)] F --> G[Disposal (Recycling & Landfill)] A --> H[Waste Water to TP] H --> I[Re Use] </pre>	Lecture cum discussion	AV Aids, PPT, Charts , Videos, Posters, Demonstration,	What are the different steps of BMW management?
10	5 min	Segregate the waste according to its category	<p>SEGREGATION</p> <ul style="list-style-type: none"> Segregation refers to the basic separation of different categories of waste generated at source and thereby reducing the risks as well as cost of handling and disposal. Segregation is the most crucial step in bio-medical waste management. Effective segregation alone can ensure effective bio-medical waste management 	Lecture cum discussion	AV Aids, PPT, Charts , Videos, Posters, Demonstration,	What are the different segregation techniques?

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			<ul style="list-style-type: none"> The BMWs must be segregated in accordance to guidelines laid down under schedule 1 of BMW Rules, 2016.  <p>COLLECTION</p> <ul style="list-style-type: none"> The collection of biomedical waste involves use of different types of container . The containers/ bins should be placed in such a way that 100 % collection is achieved. 	Lecture cum discussion	AV Aids, PPT, Charts , Videos, Posters, Demonstration	

Sr No	Time	Objectives	Content	Teaching Learning Activity	AV Aids	Evaluation
11	5 min	Store the BMW according to its category	<ul style="list-style-type: none"> Sharps must always be kept in puncture-proof containers to avoid injuries and infection to the workers handling them.  <p>STORAGE Once collection occurs then biomedical waste is stored in a proper place. Segregated wastes of different categories need to be collected in identifiable containers. The duration of storage should not exceed for 8-10 hrs in big hospitals (more than 250 bedded) and 24 hrs in nursing homes. Each container may be clearly labelled to show the ward or room where it is kept. The reason for this labelling is that it may be necessary to trace the waste back to its source.</p>	Lecture cum discussion	AV Aids, PPT, Charts , Videos, Posters, Demonstration,	Where would you store the soiled dressing materials?

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1			 <p>Besides this, storage area should be marked with a caution sign.</p> <p>TRANSPORT</p> <ul style="list-style-type: none"> Final Transport of BMW must be to CBMWTSDf only in authorized vehicle with appropriate documentation for further record 	Lecture cum discussion	AV Aids, PPT, Charts , Videos, Posters, Demonstration	

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			 	Lecture cum discussion	AV Aids, PPT, Charts , Videos, Posters, Demonstration,	

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12	5 min	Maintain the documentation of the waste and about its pre treatment	RECORD KEEPING <ul style="list-style-type: none"> • MPCB Consent & Authorization. • Formation of Committee to Establish a system to review and monitor the activities related to bio-medical waste management & maintain the record. • Documents of Tie-up with CBMWTSDf to safe dispose of BMW. • Record of Pretreatment of BMW & Trade Effluent. • Records of Training, Health Check up. • Record of BMW generation & disposal through CBMWTSDf. • Annual Report. 	Lecture cum discussion	AV Aids, PPT, Charts , Videos, Posters, Demonstration,	What the different documents that are needed to be maintained?

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1			<p>DUTIES OF HCF'S / COMPLIANCE</p> <p>It shall be the duty of every Occupier.....</p> <ul style="list-style-type: none"> • To obtain MPCB Consent & Authorization for it's activity. • To take all necessary steps to ensure the appropriate handling of BMW as per the guidelines of BMW (M) Rules, 2016. • To make all the provisions of safe segregation, pre-treatment, storage & transport to CBMWTSDf. • Pre-treatment of BMW. • Phase out the chlorinated bags, gloves & blood bags. • Not to give any BMW to Municipal solid waste unless the solid waste other than BMW. • Provide the training to all health care workers, staff at the time of Induction & thereafter once in year & maintain the record of the same. 	Lecture cum discussion	AV Aids, PPT, Charts , Videos, Posters, Demonstration,	

Sr No	Time	Objectives	Content	Teaching Learning Activity	AV Aids	Evaluation
			<ul style="list-style-type: none"> Immunize all its health care workers and others time to time & maintain the record. Establish a Bar- Code System for bags or containers containing bio-medical waste 	Lecture cum discussion	AV Aids, PPT, Charts , Videos, Posters, Demonstration,	

