

| SER No | CONTENT |
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| | <p style="text-align: center;"><u>LESSON PLAN</u></p> <p style="text-align: center;"><u>LESSON PLAN : H 4</u></p> <p style="text-align: center;"><u>INFECTIOUS & CONTAGIOUS DISEASES AND ITS PREVENTION</u></p> <p>Period - Two Type - Lec Code - H 4 Year - I (SD/SW)</p> <p><u>Training Aids</u> 1. Computer Slides, Pointer, Charts, Black Board and Chalk.</p> <p><u>Time Plan</u> 2. (a) Introduction - 03 Min (b) Classification of Diseases - 35 Min (c) Preventive Measures - 40 Min (d) Conclusion - 02 Min</p> <p><u>INTRODUCTION</u> 3. Many of the deadly diseases can be prevented from spreading to healthy persons if proper precautions are taken by checking infection and contagion of several diseases and by killing carriers of several other diseases.</p> <p><u>AIM</u> 4. To teach the NCC cadets about the different types of Infectious and Contagious Diseases and their Prevention.</p> <p><u>PREVIEW</u> 5. The class will be conducted in the following parts:- (a) Part I - Classification of Diseases. (b) Part II - Preventive Measures.</p> <p>(a) <u>PART I : CLASSIFICATION OF DISEASES</u></p> <p>6 Communicable diseases can be classified as follows:- (a) Excremental Diseases. These are those diseases which are communicated or transferred through human excreta (urine and faeces). The excreta can contaminate food, water or hands of cooks and thus pass on the infection. Typhus fever, dysentery, diaorreah, jaundice and intestinal worms are some of the important diseases belonging to this group. (b) Droplet Infection. These are those diseases which are communicated or transferred through germs which are sprayed out from the nose, throat or lungs in the air, in small droplets of saliva</p> |

during coughing, sneezing or even while talking. These germs are inhaled by a healthy man if he happens to be near the sick. Common cold, influenza, diphtheria, meningitis, (inflammation of the brain) and tuberculosis are the common diseases in this group.

(c) **Contact Diseases.** These are those diseases which are communicated or transferred when the germs pass from a sick person to a healthy person by actual body contact. Venereal diseases i.e. syphilis, gonorrhea and skin infection are some common examples.

(d) **Insect Borne Diseases.** These are those diseases which are communicated or transferred when the germs move from a sick person to a healthy person through Blood sucking insects known as ‘_Carriers’. These insects first bite a sick person and then bite a healthy person, transferring the germs of the diseases in the blood of the healthy person. These germs then multiply in the blood of the healthy person during the period of incubation, and at the end of which he starts showing symptoms of the disease carried by the insect. Some of the carrier insects and their disease are:-

(i) Mosquito - Malaria, Dengue and Filaria.

(ii) Sand fly - Sand fly fever, Kala Zar, Oriental Sore.

(iii) Lice - Typhus, Relapsing Fever.

(iv) Flies - Diaorrea, Dysentery, Cholera, Typhoid.

(v) Fleas - Plague, Typhus.

(vi) Ticks - Relapsing Fever, Typhus.

(f) **Water Borne Diseases.** Certain diseases spread due to infection carried through water. These are cholera, dysentery, diaorrea, jaundice etc. These spread as water gets contaminated through vomits or faeces passing into it. Epidemics are likely to spread if immediate steps are not taken to disinfect water and to properly dispose off the excreta through efficient conservancy arrangements. All sources of the diseases ought to be eliminated.

(g) **Animal Borne Diseases.** The germs are transmitted through the agency of animals by drinking milk or through the agency of insects. Rabies, plague, anthrax and tuberculosis are some of the common diseases.

(b) **PART II : PREVENTIVE MEASURES**

7. Specific measures to prevent diseases are as under:-

(a) **Prevention of Excremental & Water Born Disease.**

(i) Control of water route is easy by disinfecting water or providing safe water in place.

(ii) Control of the milk route is easy by subjecting the milk to boiling or pasteurization.

(iii) Food born infection may be controlled by standards of food hygiene, exclusion of sick persons from food handlings, strict attention to personnel hygiene, promotion of hand washing, protection of foods against flies and rodents and providing facilities for refrigeration.

(iv) Safe disposal of excreta will block the transmission of disease by the faecal –oral route.

(b) **Prevention of Droplet Infection.** This can be achieved by :-

- (i) Use of mask.
- (ii) Bed spacing.
- (iii) Screening.
- (iv) Dust Control.
- (v) Avoid over-crowding.
- (vi) Proper ventilation.
- (vii) Avoid spitting in public places.
- (viii) Proper sunlight.
- (ix) Proper disinfection of air.
- (c) **Prevention of Contact Disease.**

- (i) Complete segregation of patient.
- (ii) No direct personal contact between patient and the staff.
- (iii) The early diagnosis will help in preventing the spread in the patient.
- (iv) Proper disposal of all the excreta and disinfection of all articles of the patient.

(d) **Prevention of Insect Borne Disease.**

- (i) Filling, leveling and drainage of breeding places and water management will help in eliminating larvae. Adequate collection, removal and disposal of sewage and waste water are important in preventing culex.
- (ii) Use kerosene oil, fuel oil, or special oil to prevent larvae.
- (iii) Use of residual sprays like malathion.
- (iv) Use of mosquito nets, screening of doors and windows, mosquito repellent and sun down sleeves.
- (v) Control the presence of rodents and fleas in and around the home.
- (vi) Avoid contact with any species of wild rodents, especially sick or dead rodents.
- (vii) Not to handle sick or dead animals or animal waste.

8. The following preventive measures are necessary to ward off these diseases:-

(a) **Segregation of the Patient.** Important points are as under:-

- (i) Preferably shift patient to an isolated room.
- (ii) Ensure room conforms to hygiene and sanitation standards ie adequate ventilation, sunlight and cleanliness.
- (iii) Nominate one healthy person to undertake nursing and care of the patient.
- (iv) Nominated person to take preventive measures like use of mask, gown, and gloves and avoid direct contact and hand washing before and after every visit.
- (v) Clothing and utensils used by patient to be cleaned / washed separately.
- (vi) Safe disposal of patients excreta – Urine, Stool, Sputum, Refuse eg discarded dressings,

garbage etc by burning.

(b) Destroy Agents (Germs) Causing Infection in the Surrounding Area or Premises.

Immediately on detection of a communicable disease, the source of agents / germs causing infection should be destroyed by following actions :-

(i) Removal / destruction of garbage.

(ii) Cleaning the drains & keep them covered.

(iii) Remove/ dry out waste water.

(iv) Spray malathion mixed in water (ratio: malathion - 1 ml, water 1000 ml) in and around premises. (Caution - malathion is highly poisonous direct breathing / touch should be avoided). Wash hands after use.

(v) Keep premises free of rodents (rats), stray dogs.

(vi) Use mosquito nets, long sleeves, screening of doors & windows.

(c) Disinfection. All articles in contact with the patient should be disinfected by following means:-

(i) **Natural.** Sunlight and air can be used to disinfect articles like blanket, mattresses, pillows and also the rooms. The microorganisms thrive in darkness and need moisture for their survival, on being exposed to sunlight and air they die.

(ii) **Physical.** Physical agents like heat, cold radiation etc. can also be used for disinfection and sterilization.

(aa) **Heat.** Heat can be used in two ways for sterilizing.

(i) **Moist Heat.** Moist Heat in the form of 'boiling' kills germs very rapidly. In addition, 'autoclaving or Steam under Pressure' is the most effective method used to disinfect all hospital equipment which can be boiled like linen, bandage, dressing material, gloves and instruments.

(ii) **Dry Heat.** Dry heat like flaming or use of hot air oven. Sterilization by steam under pressure (autoclaving) is the commonest method for sterilization which is being used in the army.

(ab) **Cold.** Freezing or freeze-drying can inactivate bacteria. Some of them can however survive even at 0° C.

(ac) **Radiation.** It includes ionizing radiations like X rays, gamma beta and ultraviolet radiation. These are expensive methods and are not suitable for small-scale procedures.

(ad) **Other Methods.** Disinfection and sterilization can also be done by using other methods like of infrared rays, filtration etc.

(iii) **Chemical Agents.** Chemical agents like phenol, savlon, potassium permanganate, Hydrogen peroxide etc are commonly used for disinfection and sterilization. The strength of agent depends upon its used concentration being.

(iv) **Control of Food & Drink.** Salient points to be observed while feeding the patient:-

(aa) Clean water preferably boiled must be served to the patient Water container must be kept covered.

(ab) Balanced diet, well cooked, hygienically prepared food using less oil and condiments, should

be served hot. Stale, cold and food exposed to flies & insects should not be served.

(ac) Food items sourced from restaurants / dhabas must not be served.

(v) **Inoculation and Vaccinations.** Important inoculations & vaccinations are provided free of cost under various Government programmers. These are administered at Primary Health Centers/Hospitals. If not available the same should be administered/ taken from market. Important inoculations and vaccination are as under:-

Name of Vaccine Disease Prevented

Inj Rabipur Rabies

Inj TAB Typhoid

Inj Hepatitis _B' Hepatitis _B'

Inj T T Tetanus

Oral Polio Polio

CONCLUSION

9. Communicable diseases as the name suggests are most easy to prevent if timely measures are taken as recommended above. As these diseases are communicated through some carrier or agent, their spread on occurrence is difficult to control. It is advisable to always follow the prevention measures to save precious human and animal lives national resources and effort.