

The Role of Public Health Nurse in Tuberculosis Control Programme

Tuberculosis is an infectious or contagious disease caused by the Tubercle Bacilli. The Bacilli can be communicated from one person to another. Statistics tell us that there are 25,00,000 known cases of T. B. and 5,00,000 known deaths from Tuberculosis yearly in India and only 14,000 Sanatorium beds to provide the much needed treatment. Tuberculosis is one of the major health problems. The T.B. Centres in India are doing great work in preventing the spread of this disease. For prevention and control of T.B., effective treatment is essential. In the absence of adequate institutional facilities, the burden for treatment, care and after-care, and preventive measures naturally fall on the Clinic.

Tuberculosis often assumes the character of a small family epidemic, both on account of its infectious nature, and its close association with the socio-economic factors. The smallest and the basic unit for preventive work, therefore, is the patient's home.

The patient's home means the patient, the family and the environment. Instructions in the homes in prevention, examination of contacts, and arrangement of social relief in case of need, are some of the items of daily routine of the education of the domiciliary service. In this essential preventive service, Public Health Nurses and Health Visitors perform the most useful and difficult task. The Public Health Nurse is the link between the T. B. Centre and the patient in the homes. The Health Visitor is expected to give an accurate report of the home conditions to the Clinic to enable it to do its best in providing expert care and guidance to the patients in the social, economic and medical aspects of this disease. When the homes are visited, the Health Visitor must be observant, sympathetic and understanding and

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bring back the necessary information without asking any embarrassing questions of the family.

What is Taught in the Homes of the T.B. Patient?

Before going to the homes, the Health Visitor refers to the case sheet of the patient and studies it well, in order to refresh her memory concerning the problems to be dealt with in this home, and their order sheet is checked to see if any new treatment has been ordered by the medical staff. With this knowledge of the home, the Health Visitor will inspire confidence in herself, and, by knowing the case thoroughly, will be competent to give the necessary advice and guidance. The co-operation of the family and the patient is essential for the success of the work, and the Health Visitor must find ways to win the confidence of the family and get it co-operating with the Centre in preventing the spread of the disease as well as helping to cure the patient. This can be done by explaining to the patient and the family the nature of the disease, the extent of the illness and the infectiousness of the disease and how it can be spread from one person to another.

Preventative measures are explained to the family as follows:—

The T.B. patient and family are told that tuberculosis is spread by careless disposal of:

- (1) Saliva.
- (2) Sputum.
- (3) Spray.
- (4) Pleural fluid.

- (5) Pus from T.B. infected bones and joints.
- (6) Faeces.
- (7) Urine.
- (8) Vomitus.

There are no known disinfectants that will kill tubercle bacilli. The bacilli is surrounded by a wax capsule and the only way to destroy it is to melt this by applying heat. There are different methods for the disposal of sputum and first is boiling. This is the most practicable in the homes. Patients are provided with cigarette tins and a small *sigree*, which has been scientifically devised, so that when it is filled with live charcoal, it is capable of producing heat for a sufficient length of time (10 minutes) to destroy the activity of the tubercle bacilli. The sputum is mixed with water and boiled for 5 minutes and can then be thrown with other refuse. It is not advisable to tell the patient to boil the sputum for 5 minutes as many have no clocks.

N.B. A demonstration should be made before the patient and family to impress this method upon them.

Burning.

The patient is advised to spit into the tin and few drops of kerosene are added and a lighted match is dropped in. This is a much easier and safer method, but kerosene is expensive and if a home is crowded this method can be dangerous, so burning should be done in an open space.

Flush System.

In a city such as New Delhi, where the sewage system is safe, sputum mixed with a disinfectant in order to destroy odour, can be flushed away in toilets.

Precautionary Measures for Spray.

T.B. is spread by droplet infection. This is the most common method of spread. The family is taught not to stand in direct contact when the patients speak, as it is proved that T.B. germs can be spread up to six feet. In order to prevent this, the patient

is taught to cover his mouth when he is coughing and sneezing and to talk softly, and smile frequently instead of laughing, in order to prevent spread by spray. This also teaches the patient not to expend the great amount of energy used in laughing and talking loudly.

Care of Handkerchiefs.

1. The best method is to use paper handkerchiefs to wipe the patient's mouth after spitting or eating. Kleenex can be burnt after use, but paper-handkerchiefs are very expensive.

2. Small pieces of cloth can be substituted as handkerchiefs.

3. Patient should be taught not to spit in his handkerchiefs.

4. Handkerchiefs should be changed frequently, three times a day.

5. They should be taught to use the handkerchiefs to cover mouth and nose, when sneezing or coughing.

A small pail should be placed half filled with water and placed near the head of the bed and the handkerchief dropped into this pail. The handkerchiefs can then be boiled for 5 minutes in this water before washing. Then washed and put in the sun for drying and can be ironed with very hot iron for added precautions.

Care of Saliva.

Excess saliva should be expectorated, as it may contain tubercle bacilli and patients should be taught not to swallow this. There is the danger of dishes, cups and utensils etc., being contaminated; these should be kept separate, washed separately and boiled for 5 minutes. Patients should be taught not to kiss and fondle children.

Care of Bed Linen.

The linen should be dropped into water when removed from the bed and then boiled for five minutes. Soaking of linen alone is not sufficient. Chloride of Lime can be used for soaking and will act as a bleaching agent as well. The clothes can be dried in the sun and again ironed.

Damp dusting should be advised in the home of T.B. patients as droplets, when coughing, will fall on the floor and if the floor is swept dry, these droplets become a source of infection. Carpets should not be placed on the floor, as they are germ-carriers.

Nutrition.

Diet should be a high protein one as proteins are body-builders, as well as repairers of broken-down tissue. Extra vitamins are given only when prescribed by the Physician in attendance. Vegetarians should be taught to increase the protein content of their diet and the most common source of protein are curds, dal, eggs, cheese and nuts.

Isolation.

This depends upon the home conditions of the patient. The best method, of course, is to allot a room entirely for the use of the patients where possible. If a separate room is not available, a partition can be made with a sheet or curtain. At least a separate bed should be at the disposal of the patient.

Choice of Room for the Patient.

If the patient has his own room, the sunniest and airiest room should be at his disposal. The floor should be washed daily and furniture damp dusted. There should not be too much furniture in the room, but some gay pictures and good books are cheerful. No fancy curtains and pillows unless they can be washed frequently.

The patient's belongings should be in his room (dishes, cups, washing articles, linen etc.) The room should be well-ventilated with screens for the windows to keep out mosquitoes and flies. The bed should be away from draughts. We find that the home nurse has a tendency to put the patient in a draught in order to keep him cool. This can be very dangerous and may result in pleurisy or pneumonia.

Choice of the Nurse Attendant.

The attendant need not be always the mother. It is better to have only one person in contact with the patient and this person should be taught good health measures and the need for rest,

exercise, good food, fresh air. An X-ray or screening of chest should be done at least every three months of the person in close contact with the patient.

Routine for the Patient.

The value of a daily programme should be explained to the family in that, it prevents the patient from becoming bored and restless. It permits the attendant, or person chosen to look after the patient, to plan a fairly normal day. It permits the rest of the family to live as normally as possible under these conditions. The home routine should not be entirely disrupted because one person in the home is ill.

Contact Examination.

This is the most important point in the home visit programme and should be emphasized from the very first or initial visit.

Contact examination means the examination of everyone who has been in contact with the patient i.e., relatives, friends, whether in the home or out, co-workers, play-mates or school companions etc.

System of Contact Examination.

All children up to 16 years of age are tuberculin tested and screened. The negative reactors are B.C.G. vaccinated; screening of positive reactors and X-ray of doubtful cases is done. Contact examination should be done every six months, whether patient is in the home or in hospital. Contact examination again should be done every six months for a period of two years after the case has been declared arrested, or if the patient has died.

Demonstrations.

Demonstrations should be done with the sputum disposal set-up, temperature taking and recording, and any other procedure. The need to follow instructions given by doctor and nurse must be emphasised frequently. Thus it will be seen that tuberculosis nursing is not the treatment of a chest only, but of a person (the patient), his family and community.