Manage TB
Dr. Raghuram Rao
Central TB Division
DGHS, Ministry of Health & Family Welfare Government of India, New Delhi

Lecture - 64
Services offered by RNTCP in Diagnosis, Treatment, Supportive Care and Prevention of TB
Session 03

I am Dr. Raghuram Rao, I am from the Central TB Division, and I am a Public Health Specialist by profession. And today I will be speaking to you on the various services offered by RNTCP. And now I will be talking on the drug resistant TB.

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Services the TB HIV services the preventive strategies, the social protection measures TB notification and ICT enabled there is services that we have under this program.

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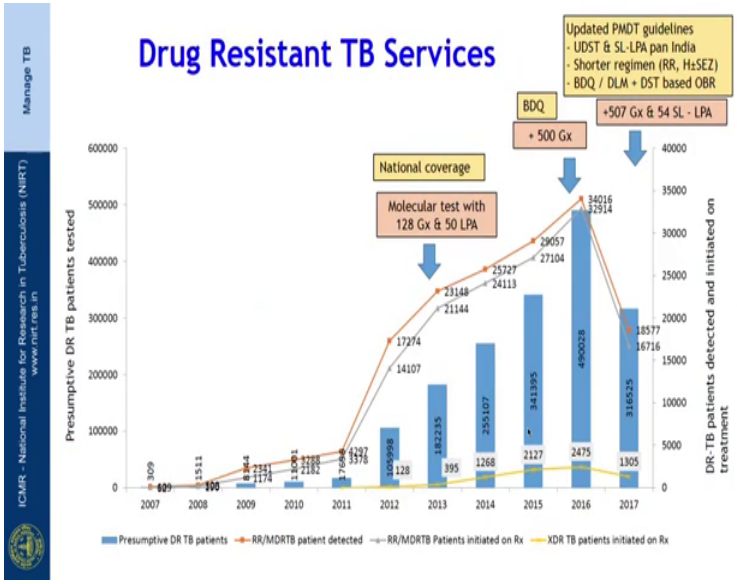

The drug resistant tuberculosis services was scaled up introduced somewhere in during 2007 and a scaled up across the country. Now the drug resistant program has developed a very rapidly in the recent years with the advent of newer drugs and newer diagnostic tools molecular diagnostic tools that have come in.

The drug resistant TB services are provided through nodal DR TB centers, Drug Resistant TB centers where there is a TB ward with the now 15 to 20 beds of a for a patients to be admitted and these services are available at the district hospital or medical colleges in our country. The program is now moving to provide decentralized services and as we have scaled up you will see that the numbers have increased. And in 2014-15 onwards, the numbers have started to increase and the program introduced gene expert or the cartridge based nucleic acid amplification test.

We have around 600 or in the country now and another you know we have achieved in 2017, another additional 500 odd machines are going to come into the program. The program introduced a newer drug called as bedaquiline the newer antibiotic that was discovered after almost 40 years and anti tubercular drug. So, that has been also introduced into this program and more than 700 patients so far I have been initiated on bedaquiline based treatment regimens.

The in the current year, we will also be introducing the shorter regimen for a treatment of drug resistant tuberculosis, and treatment duration from the conventional 24 months is now going to be around 19, or now around 9 to 11 months of a duration.

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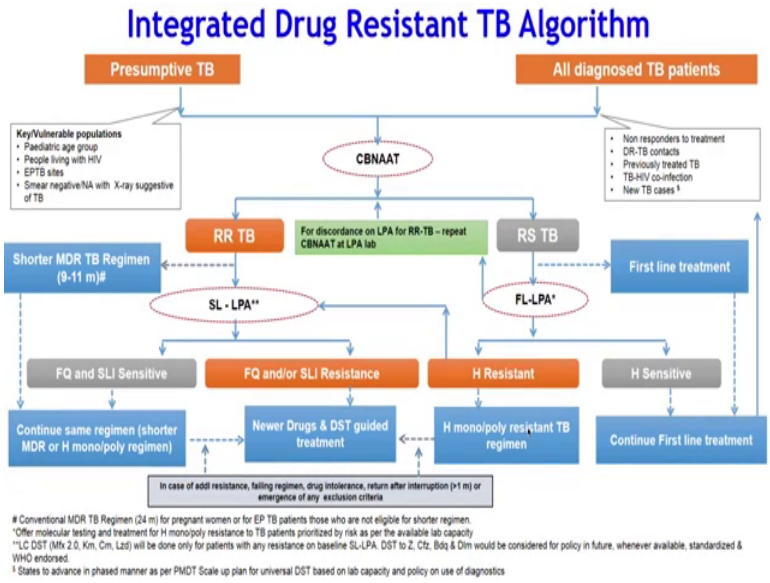

The program for drug resistant tuberculosis identification, the algorithm when they have a presumptive drug resistant TB case or like new case affinity is a non responder or someone who has a higher risk of being and with the tradition suspects resistant tuberculosis. He is offered CBNAAT directly and for specially for and certain key population which are more addressed these services are offered at the time of diagnosis itself. And when we move to universal DST universal DST, we will be offering CBNAAT for every diagnostic TB patient. So, we have already started that in 19 states and we will be scaling up in the current year to the entire country, where we will provide upfront CBNAAT for all TB diagnosed new cases.

The once such patient is offered CBNAAT and if there is resistance, the resistance since CBNAAT gives rifampicin or a resistance. So, once he is diagnosed as a rifampicin resistant tuberculosis, he you know is then offered LPA line progress a to identify the different other drugs that he would be probably resistant too. And based on the second line LPA the treatment regimen appropriate regimen is introduced and if required culture DST is done for all drugs.

Where if the patient is you know if sensitive, he and he is a high a suspicion for drug resistant tuberculosis, the patient is offered a LPA for the first line drugs also. So, that we were able to differentiate if there is a mono resistance. So, the based on the LPA result if there is in sensitive or assistance, the accordingly mono or poly resistant treatment regimens are offered.

The various services; so that are offered through the nodal DR TB centers, the samples the laboratories may or may not be attached to these laboratories, but the samples are. So, the linkages that we have under the program, the samples get transported to the higher laboratories at the state level or at the regional level, and the results are transmitted to the patient and the patient is initiated on appropriate treatment regimen.

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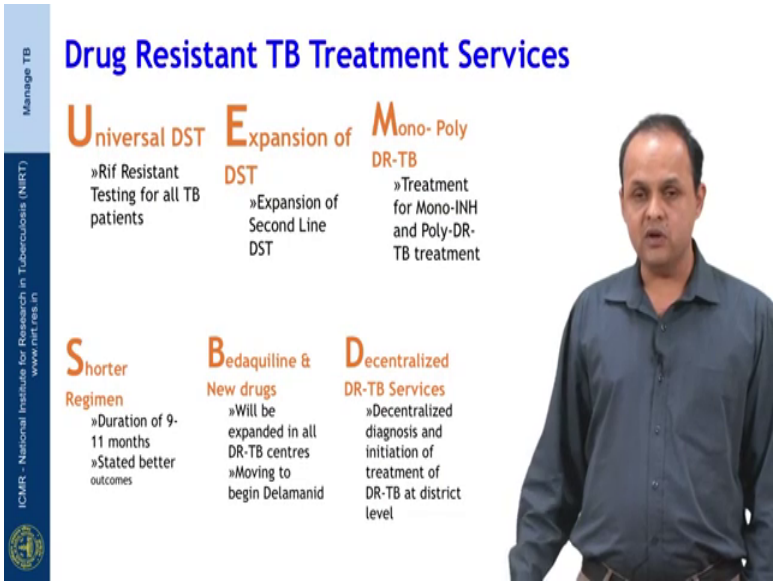

The newer initiatives like I said earlier that is coming under the drug resistant TB treatment services.

We are moving to universal DST, where every diagnostic TB patient is going to be offered baseline CBNAAT. So, that we are able to identify Rif resistance at the initial stage itself this is called as universal DST. So, this has already been introduced in a 19 states in the country, and in the coming months it will be a scaled up to the entire country. The program is also expanding it is a laboratory network to upgrade the laboratory to be able to perform second line DST and also to identify mono or refer poly additively you know cases.

The program is also introducing shorter regimen for a treatment of a drug resistant tuberculosis and the treatment would be reduced to almost 9 to 11 months based on the you know the condition of the patient. And these efforts are expected to give a better treatment outcomes and also a newer drugs like bedaquiline and delaminate are being introduced and in a very of course, conditionally controlled access program, and which means that it is available only in certain identified centers which have the resources and the capacity to manage complicated cases.

And these drugs are also you know in combination with other drug resistant tuberculosis drugs, the treatment outcomes are significantly improving and we have already initiated more than 700 patients on this within excellent treatment outcomes that are reported. The program is also scaling up towards decentralizing the DR TB treatment services and so every district or in future is going to have a small DR TB center, district DR TB centre with the at least 4 or 5 beds that would be your mark for management of a drug resistant tuberculosis cases.

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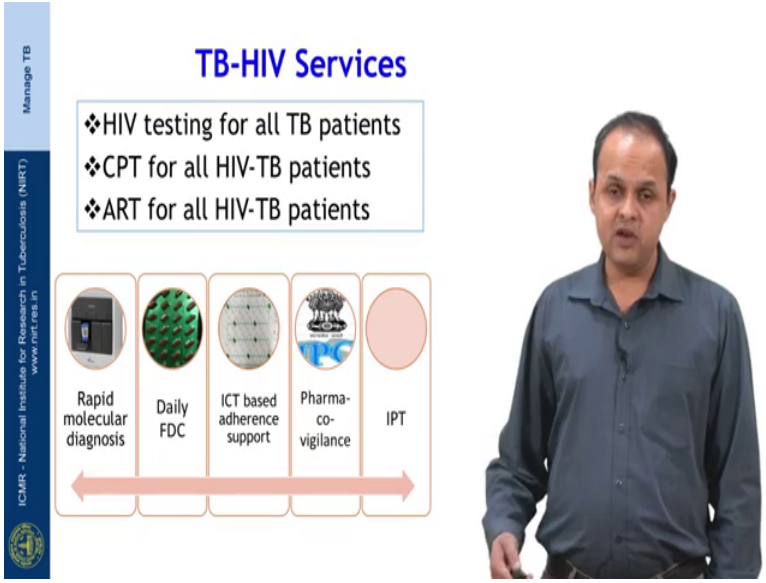

The TB HIV services that are provided under the program is a provided in a single window approach concept. So, the ART center and the HIV testing centers are all integrated, and have a very strong collaboration with the tuberculosis program. And the program also has the policy of a testing for HIV for all diagnostic TB patients and for all suspects from the attending or the clients attending the ICTs where HIV testing happens,

these suspects are referred to the nearest DMC for tuberculosis testing or the sample is transported for tuberculosis testing. The program also provides a CPT that is cotrimoxazole as prophylaxis to prevent wise for all HIV TB patients, and art is a started for all HIV TB co infected patients, irrespective of cd 4 count.

So, the any patient who is diagnosed of tuberculosis, the pill HIV patient is going to be initiated on ART. Now the program also is offering the molecular diagnostic upfront for diagnosis of tuberculosis in a people living with HIV, and the almost all the art centers in this country are linked to a CBNAAT machine if not in the same facility it is available in the same building.

So, the services for CBNAAT is available for diagnosis of tuberculosis and it has helped in a detecting cases early. The program also the anti tubercular drugs that are given, the fdcs are available at all art centers, and with 99 dots there is a adherence support also provided to these patients I will be talking about 99 dots in the subsequent slides. And the program also has pharmacovigilance services for ensuring that adverse drug reactions are reported you know in the right manner and are able to be managed.

For all pl HIV who are not having TB, the program is also offering a isoniazid as a preventive therapy and to prevent him from developing tuberculosis after ruling out active tuberculosis in that patient the program is initiating IPT.

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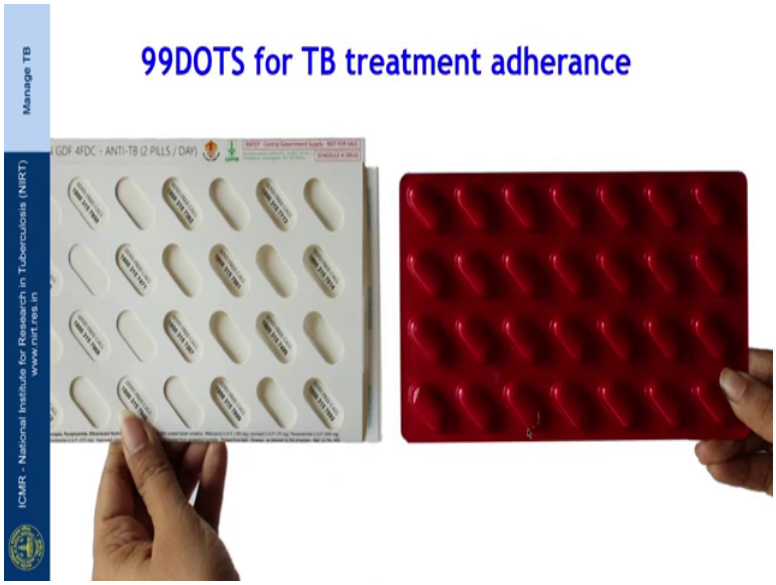

99 dots is a very simple it enabled tool, that is used for ensuring adherence.

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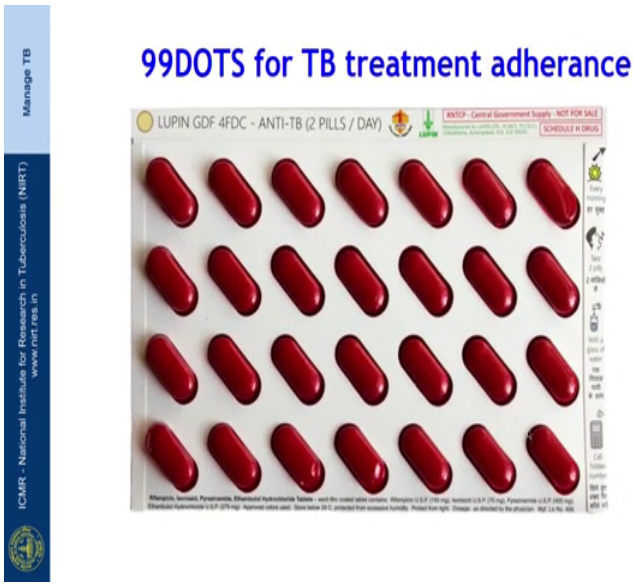

The probe the FDC blister pack is a covered with the sleeve and sealed pack sleeve and the back side of the sleeve you will see that there are you know when the patient opens the blister for taking a tablet.

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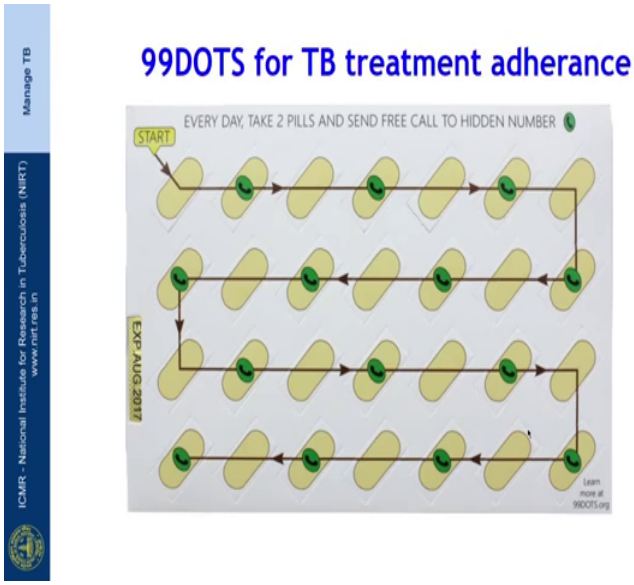

Like if for example, if the patient is taking two tablets a day based on his body weight, then for after every second tablet you will see that when he opens the blister, for the tablet there is a number that is a random number or that is visible to the patient.

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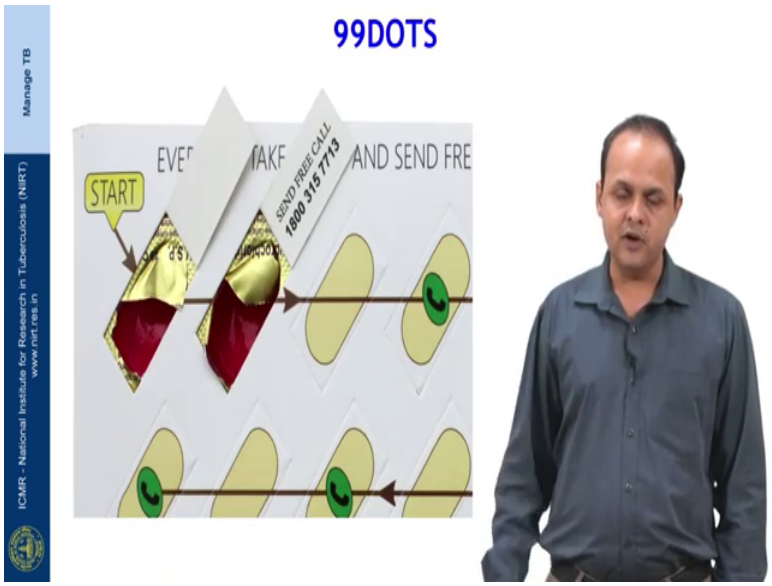

The patient then just has to give a missed call to this number and the software and the system, then identifies this as a case of you know the patient has taken drugs.

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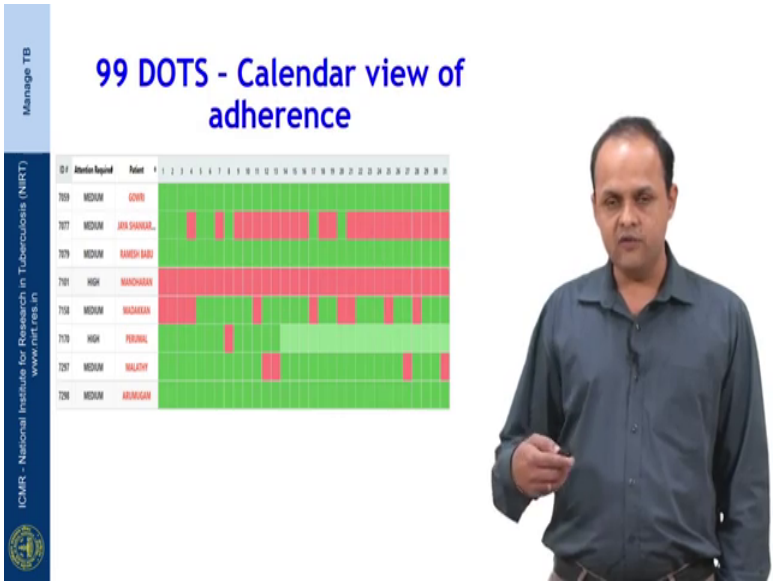

So, this is something very nice and it the information that is collected by the software is displayed as a as a dashboard, which you can see on the screen and you will see that you know if the patient has given a missed call on a particular day, the dashboard shows a green color. If the patient has not given a missed call then it gets displayed as a red color. And if the patient has what happens is once the patient has a missed or dose and alert

goes to his treatment supporter and I reminder SMS goes to the patient that you have not taken drugs today you have not given a missed call may kindly take the drugs and give a missed call you know.

So there, these help the patient or take drugs and helps in the program in monitoring adherence remotely without you know. And it helps the program to prioritize patients to make sure that the patients who are irregular in taking drugs are visited more frequently are counseled and also for necessary support is provided to ensure that they take treatment.

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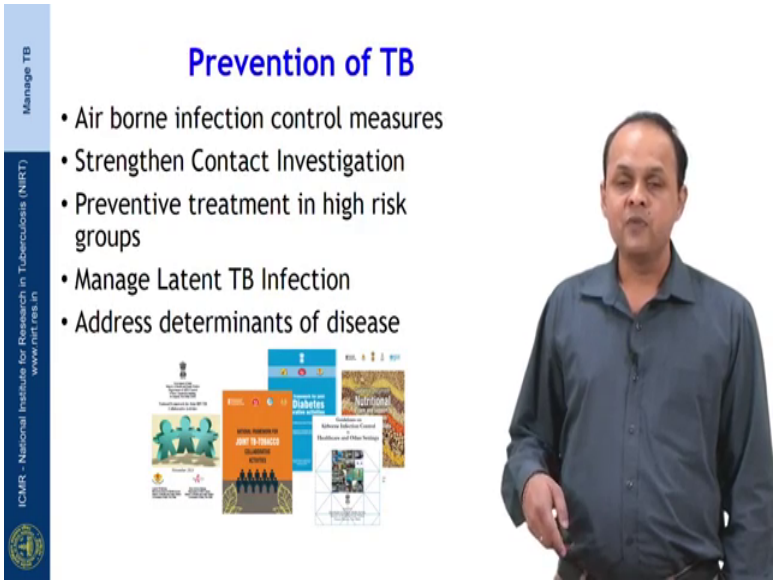

Also for prevention of tuberculosis, the program has a guidelines for implementing airborne infection control measures in the health care settings. Especially in the ART centers where people living with HIV attend the o p ds and they are most at risk of getting tuberculosis. So, there are guidelines available under the program and the necessary resources based on the based on the health facility.

If there is any administrative or any structural changes that need to be made resources are provided under the program, for the hospital to make sure that the health facility is compliant to air borne infection control guidelines. The program also has the strategy of a contacting investigation. So, once a patient is identified, the program also covers and tries to you know identify his near and dear relatives, his contacts who stay with him and try to go back and screen those people also for tuberculosis and prevent if they are you

know diagnosed they are put on treatment. But, if not they are consult on the preventive measures that need to be taken and if required isoniazid is also provided as a prophylactic therapy. These activities are you know conducted especially in the high risk groups. So, like pl HIV or slum dwellers and these are the people who are you know more prone for getting tuberculosis and the program ensures that we provide adequate preventive measures to help them getting infected or diseased with tuberculosis.

The program also is now slowly going into identification and treatment of latent TB in the country, and in the national strategic plan for 1917 2017to 20 25 we have strategies identified for diagnosis of latent TB as well as providing a in a drugs for latent TB infection. And the program also has a services and linkages to address the social determinants of the disease. And basically it is you know tuberculosis is not just a disease, but has multiple facets that are linked to it and to address the living conditions, where does the poverty to address the nutritional requirements.

There and the comorbidities that the patient may have the program has a linkages and the structured collaborative frameworks like the TB HIV framework, the TB diabetes framework, the TB tobacco framework there are nutritional guidelines available. So, these are various you know steps that the program has taken to address these issues.

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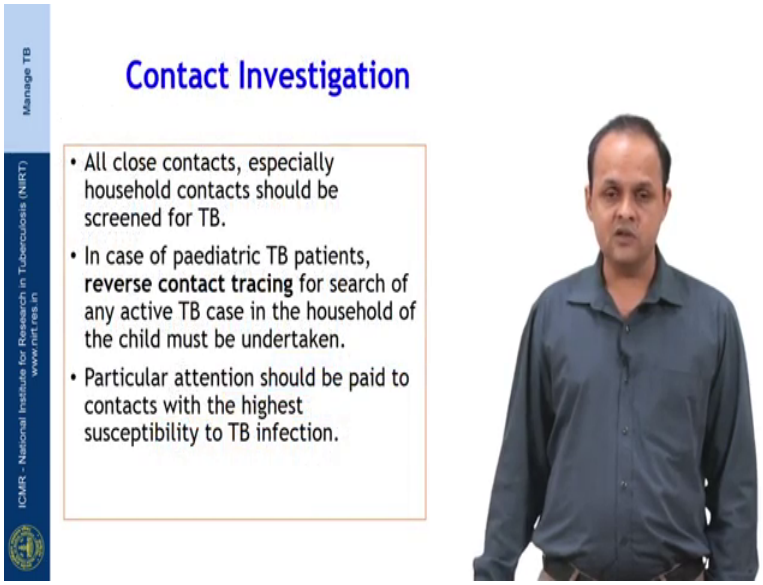

In contact investigation just a couple of points to be stressed is that, all under the program all close contacts especially the household contacts are to be screened for

tuberculosis and in case of pediatric TB patients the reverse contact tracing is done. If you know a passive case is identified in the health facility, pediatric cases diagnosed then the program goes back to his house and tries to screen all the adults and the people living in the household to find the index case of tuberculosis. And if there is any you know active TB case in the household identified, then he is initiated on treatment he or she is initiated on treatment.

And in the now also in the contacts that we find in these houses households, we the program should provide special efforts to make sure that at risk population. If they are there in those households they are provided.

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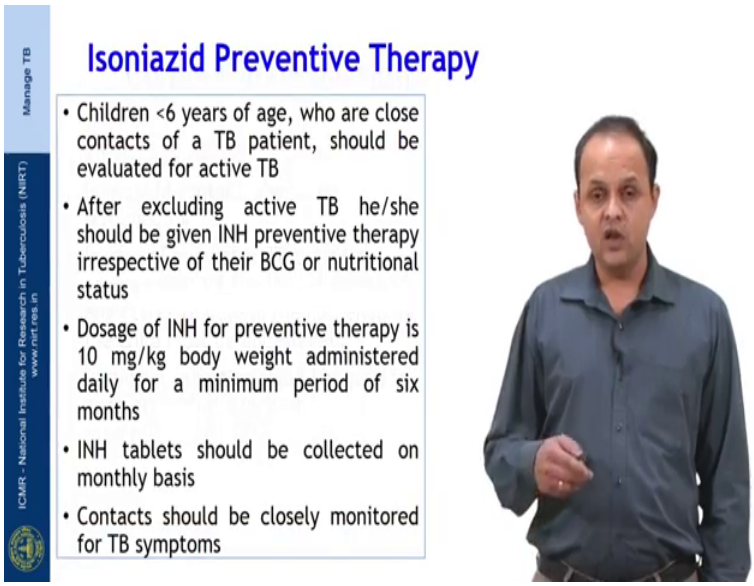

You know the investigations for diagnosing latent TB or rule out active TB, and after that isoniazid is provided under the program as a preventive therapy. In children for less than 6 years of age who are you know contacts of a adult patient, who is diagnosed in the household these all children below 6 years are evaluated under the program.

And are you know after ruling out active TB in them, they are provided INH for 6 months as a therapy prophylactic therapy. And this has to be provided irrespective of whether they have had a BCG vaccination or no or irrespective of their nutritional status. Even if they are malnourished they need to be provided, they are more prone now if they are malnourished. The INH is provided at the dosage of 10 milligram per kg body weight and it is to be taken daily and for a minimum period of 6 months.

Now, these tablets are provided on a monthly basis to the patient. However, their relative and they are expected to follow up and collect drugs in a monthly basis. The most important thing in the contacts is that they should be every month when they come for a follow up, they need to be screened for ruling out TB symptoms, and if required they need to be investigated again.

The program is also going into newer drugs that are going to be recommended, there are drugs called as reefer pentene which can shorten up the providing prophylactic therapy. The drug has to be taken only once a week for 12 weeks, and that would be enough for preventing him from developing active disease. But these are things that are going to be coming into the program.

Thank you for the patient listening to this session.