TALKING TB

A Handbook for Community Radio

REACH

TB-FREE

AXSHYA

Table of Contents

Introduction

TB kills three people every two minutes in India, which bears one-fifth of the world's TB burden. Tuberculosis remains a major public health problem in India and ensuring access to accurate information on TB is one of the biggest challenges. The emergence of drug-resistance has accelerated this crisis and there is now an urgent need to improve awareness about TB among communities. The growing community radio network in India presents an opportunity to reach listeners who have limited access to other media sources, and therefore accurate information on health issues like TB.

About Project Axshya

Project Axshya (meaning 'free from TB') is a civil society initiative to strengthen TB care and control in India. Part of the Global Fund Round 9 Grant for 2010-15, the overarching objectives of Project Axshya activities are to support the Government of India's Revised National Tuberculosis Control Programme (RNTCP) in two ways: to expand its reach, visibility, and effectiveness and to engage community-based providers to improve TB services, especially for women and children, marginalized, vulnerable and TB-HIV co-infected populations. As part of Project Axshya, REACH, a Chennai-based non-profit organisation dedicated to the fight against TB, has worked closely with community radio stations across India.

To read more about Project Axshya, please visit http://www.axshya-theunion.org
To find out more about REACH, please see www.reachtbnetwork.org

About the Project Axshya Community Radio Initiative

Since 2010, Project Axshya has involved community radio stations to improve understanding of TB among communities and strengthen civil society engagement. The key objectives have been:

- To create awareness about TB among local communities, thereby dispelling any existing myths and misconceptions;
- To build knowledge about locally available TB services among communities, thereby linking people to diagnostic and treatment services that they may need immediately or in the future.

Overall, this initiative has been successful in developing a replicable model for engaging community radio for public health issues by:

- Involving over **50 stations** to generate over **2000 hours** of programming on TB
- Generating content on TB in **9 languages** across **17 states** in India
- Bringing communities face-to-face with local civil society leaders and service providers through **130 community meetings**
- Increasing the technical capacity of community radio to develop quality, **innovative programming on TB** through customised skills-building workshops
- Generating anecdotal evidence through **success stories** to suggest that stations have been able to provide their listeners with information on TB that they previously did not have – this can be seen through the calls and messages received by stations and from interactions with those who attend community meetings.

- **Building linkages between community radio**, their listeners and local healthcare providers. Some partner stations have been successful in building on their engagements through Project Axshya and establishing independent links with local TB authorities
- Creating a **structure of engagement** that brought TB onto the radar of community radio for the first time through Project Axshya and ensured their long-term interest in broadcasting programmes on TB.

About this Handbook

As of 2015, there are almost 200 functional community radio stations in India, and several more are in the pipeline. 'TALKING TB: A HANDBOOK FOR COMMUNITY RADIO' is intended to help build the capacity of stations that have not had an opportunity to participate in Project Axshya as well as any new stations that may become operational after 2015. Through a structured self-learning approach, this handbook provides community radio stations with step-by-step guidance on how to produce and broadcast episodes on TB. We hope that this handbook will be useful to stations that are keen to provide their listeners with valuable information on TB and thereby guide their health decisions.

Acknowledgements

This handbook has been written by Dr Jaya Shreedhar, Chennai-based independent health communications consultant, with inputs from Ms Anupama Srinivasan of REACH. Ms. Jessica Gupta, Mumbai-based consultant, has translated the document into Hindi.

We thank Dr Shaheed Jawahar, Consultant, REACH for his technical review of the Handbook. Ms Sheela Augustine and Ms Nalini Karunakaran of REACH prepared the background information and talking points for the stations.

This publication has been made possible through the Global Fund Round 9 grant (2010-15). We thank Dr Sarabjit Chadha, Mr Subrat Mohanty, Dr Anand Das and all colleagues at The International Union Against Tuberculosis and Lung Disease for their support and guidance over the last five years.

This handbook draws on resource materials developed by Internews Network. In addition, sections of the handbook draw on or are extracted or adapted from resources developed by CDC, the Stop TB Partnership, WHO, UNICEF, UNAIDS, RNTCP and TBfacts.org, among others. Links to sources are included in the respective sections.

Finally, we are very grateful to all our community radio partners, who have invested considerable time and energy in producing high-quality, powerful programmes for this project. Thank you for joining the fight against TB and for speaking up to stop TB.

How to use this handbook

Talking TB: A Handbook for Community Radio is designed for community radio presenters who are involved in educating and counseling communities about Tuberculosis.

Part 1, the Knowledge Section, presents a range of basic information about TB in radio style. In addition some TB topics are explored in detail through segments called Radio Spotlights.

Part 2, the Skills Section, presents a selection of basic radio skills necessary to talk about TB – or any issue! - on radio. Practical exercises are included in each module.

The handbook is meant to be adapted to serve your local requirements. You may wish to:

- translate the handbook
- include local case studies
- focus on the situation in your community, village or taluk
- expand some sections
- insert new sections of your own
- add contact details of local experts, NGOS and other interviewees.

It would be useful to pretest the handbook with community radio presenters who are to use it. The handbook may then be adapted to meet their needs. To pretest, go through the handbook page by page with your radio presenters and separately with various listeners in your broadcast radius. Identify what was easily understood and useful and what was not and modify the content accordingly.

You can either read through the handbook in one session or look up one module every day. Please do share the contents of the handbook with all staff at your community radio station.

Thank you very much and we do hope you will find this useful. Please feel free to email us at reach4tb@gmail.com with any feedback or comments you may have on this Handbook.

PART 1: THE KNOWLEDGE SECTION

ALL ABOUT TB

MODULE 1
TB Basics

Manoj is twenty-five years old.
He had been coughing for a month.
At night his body burned with fever.
He would wake up in a sweat.
But he had no time to go to the hospital.
He earned his living as a tailor's assistant.
Manoj could not afford to lose even a day's salary.

As the days passed, Manoj lost weight.
One day he noticed a little blood in the sputum he had coughed out.
Manoj took a day's leave.
He went to the government hospital.

The doctor examined him.
She put a stethoscope on his chest and listened to the sound of his breathing.
She felt for swellings under his jaw and in his neck.
A nurse asked him to cough up some sputum into a cup.
The lab technician looked at his sputum under a microscope.

They told him that he was sick with tuberculosis or TB.
Manoj's lungs had the germs that caused TB.

The name of the germ that causes TB is Mycobacterium tuberculosis.
Lung TB is called pulmonary tuberculosis.

The doctor explained that most people in the world who had TB had lung TB.
This was because TB germs preferred to stay in the lungs.
But M.tuberculosis could reach any part of the body through the blood stream.
If the TB germs affected the spine, they usually caused backache.
If the TB germs reached the brain, they usually caused dizziness or fits.

The TB germs in Manoj's lungs had been multiplying for many months.
Manoj's body had tried to fight the germs.
Special defense cells in his body had surrounded and killed the germs.
In the process, some lung cells too were killed.
The mass of dead cells formed a cheesy material.
Some of the cheesy material came out each time Manoj coughed.
This was how a small cavity came to form in Manoj's lung.
The cavity was lined by TB germs.

Each time Manoj coughed, millions of TB germs escaped from the cavity and came out through his mouth and nose.
The germs are so tiny that humans cannot see them.
The TB germs are carried into the air in tiny droplets.
If someone close by breathed in the droplets, the TB germs get sucked into their lungs.
This is how TB germs spread from people with lung TB to healthy people.

Manoj thought about the tailor shop where he worked.
Five others worked with him in the small room.
There were no windows.
He worried that he may have infected them too.
TB germs do not spread from person to person through water or food or by touch.
TB germs spread through the air.
There is an easy way to stop TB germs from spreading through the air.
You just have to cover your mouth and nose with a cloth when you cough.

The doctor also explained that only some people who breathed in TB germs became sick with TB.
Such people were said to have TB disease.
TB disease was also known as active TB.

However, most people who breathed in TB germs did not fall sick with tuberculosis.
Their bodies could fight and keep the TB germs in check.
Such people were said to have latent TB.
People with latent TB do not spread TB germs to others.
They live healthy lives and have no symptoms of TB.

People with active lung TB usually feel sick
They usually have a cough for two weeks or longer.
They may lose weight.
They may lose their appetite and not feel hungry.
They may have fever and sweating at night.
They may feel tired and weak.
They may have chest pain.
They may cough up blood in the sputum.
They may spread TB germs to others.

There are thousands of men, women and children with TB disease in the world.
The World Health Organization says every year, 90 lakh people get TB.
That is, there are nearly 25,000 new cases of TB every day.
Every year, 15 lakh people die of the disease.

In India, 20 lakh people get TB every year.
This means that India has the highest number of people with TB in the world, among all countries.
Every year, at least 3 lakh people die of TB in India.

There are people with TB disease in our district.
Many don't know that what they have is TB.
Someone with a cough for two weeks or more should go to the nearest government hospital and get tested for TB.

The doctors have special tests to find out if someone has TB.
They ask the patient to cough up sputum into a cup first thing in the morning.
They look for TB germs in the sputum under a microscope.
They may test the sputum with another machine called GeneXpert.
They may take an X-ray of the chest.

Someone found to have TB disease needs treatment.
Left untreated, TB can kill you.
The doctors told Manoj that with treatment, his TB could be cured.
There were medicines that could kill the TB germs and cure the patient.
Manoj would not have to pay for the medicines or the tests.
The government treats people with TB for free.

A health care worker would regularly give Manoj TB medicines to swallow.
Manoj would have to take the medicines for six months.
He could not miss a single dose.
The health care worker would watch and make sure that Manoj swallowed each and every dose of the tablets regularly.
Because of the supervision by the health care worker, the treatment was called Directly Observed Treatment Short Course, or DOTS for short.

The doctors would check Manoj's health regularly.
The doctors would also check Manoj's sputum for TB germs to make sure he is being cured.
Till the doctors said he was cured of TB, Manoj should not stop DOTS. This is very important.
The doctors told Manoj that if he did not take the tablets, TB might kill him.
If he took the treatment irregularly, his TB germs could become resistant to the medicines.
They also reminded him that he must cover his mouth while coughing.
That way, his TB germs would not spread through the air and infect others.
They told him to eat nutritious food.
They also told him to bring his family to be tested for TB.

Manoj decided to take DOTS.
He did not miss a single dose of his TB medicines.
His DOTS provider became his good friend.
Manoj took care to eat nutritious food.
He went to the hospital for regular check ups.
Six months passed.
The doctors checked Manoj, examined his sputum and pronounced him cured.
Today Manoj is free of TB.

Every year thousands of people like Manoj are cured of TB by the government.
The government has a special program to tackle the problem of TB.
It is called the Revised National TB Control Program or RNTCP.
The RNTCP helps people to find out if they have TB disease.
The RNTCP also treats people with TB disease till they are cured.
Manoj was cured by RNTCP doctors.
Manoj's tests and treatment were free of charge.

Q and A

This section lists some questions you could ask potential studio guests as well as the answers they may give. For example, you could invite the State TB Officer or District TB Officer of your district as the studio guest for this episode and ask the following questions.

Q: How big is the problem of TB in India?

A: India has the most number of people with TB disease in the world. The RNTCP estimates that about 20 lakh Indians fall sick with TB every year. About one out of every five people who get TB disease in the world is an Indian. The World Health Organisation estimates that 2-3 lakh people die of TB every year in India.

Q: Does everyone who breathes in TB germs fall sick with TB?

A: In most people who get infected with TB the body is able to fight the germs and stop them from multiplying. The germs become inactive. But they remain alive in the body and can become active later. This is called latent TB infection. People with latent TB infection:

- Have no symptoms
- Don't feel sick
- Can't spread TB bacteria to others
- Usually have a positive skin test reaction

Most people who have latent TB infection never develop TB disease. In these people, the TB bacteria remain inactive for a lifetime without causing disease. But in other people, especially those who have weak immune systems, the bacteria become active, multiply, and cause TB disease.

Q: Why is TB a big problem in India?

A: TB continues to spread in India. The main reason is people don't get diagnosed and treated properly for TB disease. It is estimated that each year about ten lakh people with TB in India go undetected and untreated. That is why we have the largest number of people with TB disease in the world.

Q: How does TB spread?

A: Millions of TB germs are sprayed into the air when a person with TB disease in the lungs sneezes or coughs. People nearby who breathe in the TB germs become infected. People with lung TB can spread it to those with whom they are in contact. Family members – particularly children – and co-workers can get infected. People with lung TB must close their nose and mouth with a clean cloth when they cough, to prevent TB germs escaping into the air.

Q: Why do only some people get TB disease?

A: TB germs cause disease by multiplying in the tissues and damaging them. When a person's immunity is low, they fall sick with TB in a few weeks after they are infected. Some people have weak immune systems and fall sick easily. Small children and babies, people who are undernourished, people who have high blood sugar, people who smoke or take too much alcohol and those who have HIV infection are all likely to fall sick with TB more easily than others.

Q: What can be done to improve the diagnosis and treatment of TB in India?

A: First, people need to understand that a cough of more than two weeks may be due to TB. They need to go to the government clinic and get examined and tested properly. A huge number of those with TB symptoms seek care from doctors outside the RNTCP. Some of them may get a proper diagnosis. Some may not and their TB goes undetected. Even if patients are prescribed the correct course of treatment, they may stop the drugs on their own once the symptoms go away. The private doctor is unable to track whether the patient completes the treatment or not.

In the private sector, the patient has to pay for the long course of treatment. They may not spend money on completing the full treatment, once they feel better. When the TB germs are not cleared fully, the few that are left begin multiplying again because the treatment has been stopped. The new germs may change themselves to be resistant to the TB drugs they have been exposed to earlier. Once this happens, the person develops what is called drug-resistant TB. This type of TB is difficult to treat; the different TB drugs used for drug-resistant TB produce side effects and cost a lot of money.

Alternatively, you could invite a person with TB or someone who previously had TB to share his/her experiences. You could ask him/her:

How did you find out you had TB?

Describe your experience with DOTS.

What support did you receive from your family?

What advice would you give to someone who finds out they have TB?

KEY MESSAGES FOR LISTENERS

- **If you have a cough of more than two weeks go to the government clinic or hospital for a checkup.**
- **If you have lung TB, cover your nose and mouth when coughing.**
- **If you are diagnosed with TB, you must complete the full course of treatment, without skipping doses or stopping treatment.**

Radio Spotlight 1: How is TB diagnosed?

This spotlight section is in the format of a brief feature story followed by an interview.

The DOTS Microscopy Center in Pulianthope hums with life.
It is only 7 AM.
But the waiting benches are filled with men, women and children.
Many have come to get tested for TB.
The Center technicians ask them to give two samples of phlegm coughed from deep in their lungs into a cup.
The phlegm is called sputum.
The technicians test sputum for TB germs.
They smear each sputum sample on a glass slide.
They stain them with a colouring agent.
Some smears have TB germs.
The technician sees them as pink rods under the microscope.

Another technician uses a special machine to test the sputum.
The machine is called GeneXpert.
GeneXpert tests each sample of sputum to check for TB germs.
GeneXpert also tests the germs in each sample to see if they are killed by Rifampicin, one of the important drugs used in the treatment of TB.
Knowing exactly which medicines can kill the TB germs in someone's sputum is very important.
It helps the doctor choose the right TB medicines for each patient.

Pandian is an autorickshaw driver.
When his cough did not go away even after three weeks, he went to the District TB Centre.
The doctor examined him.
The doctor explained that Pandian must get tested for TB.
The nurse gave Pandian a clean plastic container.
She gave him clear instructions.
Pandian must cough and collect sputum from deep in his chest into the container.
He must collect the sputum first thing in the morning.
He must close the container securely and bring it to the center.

Pandian gave his sputum sample to the Pulianthope center next day.
He asked how much the test would cost.
They told him it was totally free of charge.

Q and A

This section lists some questions you could ask potential studio guests as well as the answers they may give. For example, you could invite a government Medical Officer or a qualified doctor as the studio guest for this episode and ask the following questions.

Q: Who should take a TB test? When?
A: Do you have the following symptoms?

- cough for more than 2 weeks
- fever for more than 2 weeks
- significant weight loss
- blood in your phlegm

If you have these symptoms, you should get tested for TB.

Q: What does the sputum microscopy test find out?
A: Pulmonary or lung TB is diagnosed through a sputum microscopy test. Two samples of sputum are taken from each person.

Q: How do doctors confirm if someone has TB in other parts of the body?
A: Extra-pulmonary TB is diagnosed by taking appropriate specimens of the 'presumed site' for culture (i.e growing the TB germs in an appropriate medium) or microscopic examination. For example, if the doctor suspects TB in the abdomen or stomach, he will take a sample for biopsy from the abdomen and send it for testing. He may also do a CT scan of the abdomen.

Q: How do skin tests for TB work?
A: The skin test for TB is used to find out if someone is infected with TB germs. The test is called the Mantoux tuberculin skin test. The test cannot tell if the person has TB disease. The Mantoux skin test injects a small amount of fluid called tuberculin into the skin in the lower arm. If the person is infected, the area around the injection becomes red and slightly raised within 2 to 4 days. Only a trained health care worker can read the skin reaction correctly. If an adult tests Mantoux positive, it does not mean he needs treatment for TB. Only a sputum test can confirm that he has TB disease and whether he needs treatment. In children however, a positive Mantoux test can be an indication to begin treatment for TB.

Q: How does the doctor diagnose that someone has drug-resistant TB?
A: The doctor can find out if someone has drug-resistant TB germs by testing which drugs are able to kill the germs and which drugs cannot. The test is called Drug Sensitivity Testing or DST. Ideally, it should be offered to all diagnosed TB patients before they start on treatment. In DST, the TB germs are grown in a medium that has the different TB drugs.

DST is absolutely necessary for TB patients who have failed treatment with first-line drugs.
DST is important for children who don't respond to TB treatment.
TB patients who have been in contact with someone with drug-resistant TB also need DST.
If a TB patient is found to still have TB germs in a follow-up sputum smear test during treatment with first-line drugs, he must undergo DST.
DST is useful in diagnosing TB patients who have already been treated for TB previously.

Q: How long do Drug Sensitivity Tests take?
A: It could take eight weeks or more to get the results of DST. This is because it may take more than a month to grow enough TB germs from the sputum sample. Different TB drugs are added to the TB germs to see which drugs can kill them.

Q: Are there faster tests for drug sensitivity?
A: GeneXpert is a new test that can rapidly diagnose TB disease and drug-resistance. The test can detect TB germs and resistance to the TB drug Rifampicin in less than 2 hours.

Q: Many labs advertize that they can diagnose TB through blood tests. Are these tests reliable?
A: Serological or blood tests are banned in India and are not recommended for diagnosing TB. If a doctor or lab offers you a blood test for TB, do not do it. These tests are not reliable and will not tell you whether you have TB or not.

Radio Spotlight 2: Treating TB

This spotlight is in the format of an interview with a TB specialist. When technical information is required, such as the names of medicines and treatment for TB, it is always best to get this directly from a doctor. Your listeners are more likely to trust and believe this when it comes from a qualified doctor.

RJ (Radio Jockey): Tuberculosis (TB) is caused by a germ called Mycobacterium tuberculosis. TB germs usually attack the lungs. Some people are unable to fight the germs. The TB germs multiply in the lungs. They cause the person to get fever and cough. As the germs keep multiplying, they destroy lung tissue.

TB germs escape from the lungs through the breathing tubes and out through the mouth and nose. The germs get breathed in by others nearby. They get infected with the TB germs too. This is how TB spreads. A person who coughs out TB germs can infect up to 15 people in a year.

There are many effective medicines to kill the TB germs. Taken properly, the medicines can completely cure TB disease. The more people get cured with TB, the less TB spreads in the community.

So what are the medicines that can cure TB? How is TB treatment given by the government? What should patients do to get cured? What can the families of people with TB do to support the patient through treatment? How can you as a listener help?

Dr. Jawahar is a TB specialist. He worked at the National Institute for Research in Tuberculosis in Chennai. He has over 30 years of experience in treating people with TB.

Q: What are the medicines that can cure TB?
A: There are about 15 drugs that are in use to treat TB. TB drugs work by either killing the germs or by preventing them from multiplying. When the drugs work well, the TB germs reduce to a small number. We choose the most suitable combination of TB drugs for each patient with TB disease.

Q: Do people with TB have to take more than one drug?
A: Yes. We always treat patients with a combination of TB drugs. Usually we give a combination of four drugs. It is essential to take several TB drugs together. If only one TB drug is taken on its own, then the TB germs quickly become resistant to that drug.

Q: How many drugs are given to someone with TB? For how long?
Most TB patients get six months of treatment. In the first two months, they get four powerful TB drugs together. This is called the intensive phase. Then they have to take two drugs together for a further four months. This is called the continuation phase.
For the two-month intensive TB drug treatment phase they should receive:

- Isoniazid
- with Rifampicin
- and Pyrazinamide
- and Ethambutol

For the four-month continuation phase they should receive:

- Isoniazid
- with Rifampicin

These are the most effective TB drugs we have. If taken properly, they will completely cure a person of TB. So they are called first-line drugs. First-line treatment can cure more than 85% of those with TB disease.

For those patients who have previously received treatment for TB, the number of drugs and the duration of treatment are both increased.

Q: How does the RNTCP give treatment to TB patients?
A: The RNTCP treats TB patients effectively through Directly Observed Treatment, Short Course, known as DOTS. The complete set of drugs that a patient needs from the start to the end of the treatment is kept in a box with the patient's name on it. This ensures that the patient will not run out of drugs during his or her treatment.

Community members or health workers work as DOTS providers to the patients. Each DOTS provider takes the responsibility of watching their patients swallow the TB drugs regularly for the six months of the course.

Q: Why should TB drugs be given by DOTS providers? What can't people take the TB drugs on their own?
A: To be cured of TB, the patient must take the TB drugs exactly as the doctor says. DOTS providers ensure that the patient does not miss a single dose and that they finish the full course of TB treatment.

Some people don't get cured because they forget to take the drugs or miss their dose now and then. Some others don't get cured because they stop the treatment once their cough goes away. In these people, the TB germs keep multiplying. The new TB germs learn to resist some of the first-line TB drugs. The person falls sick again. This time, we have to check which TB drugs don't work for them. We have to remove those drugs from the treatment. We then bring in other TB drugs called second-line drugs. Second-line drugs are more expensive and have more side effects. DOTS is a system that tries to ensure that people with TB take their medicines for the entire treatment period and get cured.

Optional Q: What are the second-line drugs used to kill TB germs?
A: Second-line TB drugs include those that can be given as injections. Some of the injectable TB drugs are Streptomycin, Kanamycin and Amikacin. Other second-line drugs include Fluoroquinolones and some drugs that don't kill TB germs but simply prevent them from multiplying, such as Ethionamide, Cycloserine, PAS etc.

Optional Q: Are scientists trying to develop new TB drugs?
A: All the TB drugs we are using today were developed more than 40 years ago. Even though TB is a serious problem, there have not been any new drugs for TB in several decades. Drug-resistant TB is a growing problem for TB control. Today, scientists have begun to work on some new drugs. Two new ones – Bedaquiline and Delamanid – have been licensed for limited use with very strict criteria.

MODULE 2
TB and children

Father Lawrence's Sunday sermon was all about TB.
He looked out over the people gathered in the Our Lady of Good Health Church in Pannur.
The church was almost full, with men, women and children.
Some were dozing.
Most were listening carefully.

Father Lawrence had prepared his sermon with care.
He was determined to tell his congregation what they needed to know about TB.
His sermon could save lives, he thought.

He told them that TB was a disease that was caused by a germ.
The TB germs lay quietly in the bodies of healthy people.
If the person became weak, the germs multiplied and caused TB disease.
TB affected men and women.
But children also easily fell ill with TB.

Father Lawrence himself had conducted the funeral service for little Irudaya Mary last week.
By the time she was diagnosed with TB, it had been too late.
Father Lawrence had spoken with the doctor.
She specialized in treating children with TB disease.
She was Dr. Sowmya.
She had researched TB in children at the National Institute for Research in TB in Chennai.
She had explained to Father Lawrence that people needed to know how to protect their children from TB.
If parents understood how TB spread and learnt how doctors diagnosed and treated it, it could prevent other children like Irudaya Mary from dying of TB.

The Our Lady of Good Health Church was the pride of Pannur village.
Father Lawrence and his church workers organized a health camp for the children in Pannur.
The Panchayat president worked alongside them.
She told the villagers to bring their children for a check up.

Dr. Sowmya's team from Chennai performed street plays about TB.
They told the villagers the basic facts about TB in children.
Children could easily get infected with TB germs.
A child who had close contact with someone who had lung TB could get infected.
The longer the child spent time in the company of someone with lung TB the more chances of the child picking up the TB infection.
The risk of the child getting TB was higher if the person with lung TB was coughing out TB germs in his or her sputum.
Naturally, children living closely with family members who had active lung TB face the greatest risk of breathing in TB germs and getting infected.

The child's risk of getting TB infection was greatest when the child's caregiver, usually the mother or the grandmother, had lung TB.

The villagers had many questions to ask the doctors and nurses at the camp.
Dr. Latha and Nurse Rita answered their questions.
Dr. Latha told them it was important for a family member with TB to cover the mouth and nose when coughing or sneezing.
That would prevent TB germs from escaping into the air and infecting children in the household.
Patients should dispose of the sputum by collecting it in a cup.
They could flush it down the toilet, if possible.
It was also important to keep the house well ventilated.

The health camp examined more than a hundred children from Pannur village.
Many of them were underweight and malnourished.
They needed further check ups.
They needed to be X-rayed and their sputum tested for TB.

One week later, Dr.Sowmya told Father Lawrence that the camp had helped detect 15 children from Pannur village with TB disease.
The team also detected TB among ten of the family members of the children with TB.
The children were to begin treatment for TB.
The nurse weighed each child carefully.
Dr.Latha fixed the dose of TB medicines according to the child's weight.
The children came to the hospital for regular checkups.
Each time, the children were weighed.
If the weight improved, the child was getting better.

Father Lawrence never stopped reminding his congregation about TB.
He thinks of the fifteen children with TB in Pannur who were now on treatment.
He slips in facts about good health and TB in his sermons now and then.
He is sure that 'Our Lady of Good Health' approved.

Q and A

For this episode you could invite as your studio guest a child specialist or Pediatrician. You could also invite the Principal or a teacher from the local school and the parent of a child with TB. It is better to not invite children themselves as studio guests. The following section lists some potential questions you could ask the child specialist.

Q: Do many children suffer from TB in India?
A: In India, more than 60,000 children get TB every year. Children get TB infection from adults with TB. In India, 2 adults die of TB every 3 minutes. About twenty lakh Indians fall sick with TB every year. TB in children is common wherever TB is common among adults. Childhood TB is a serious problem in our country.

Q: How big is the problem of childhood TB in the world?
A: Each year, more than five and a half lakh children fall sick with TB globally. Most of them have lung TB. About one in five has TB disease affecting other parts of the body. TB kills about 80,000 children every year. The number increases when you add children dying with both HIV and TB.

The death of parents due to TB again affects children. In 2010, WHO estimated that more than one crore children had become orphans when their parents died of TB.

Q: What tests are done to find out if a child has TB?
A: Doctors usually examine the child carefully to look for signs of TB. An important sign is low weight and poor growth. Chest X-rays help to diagnose TB in children. The doctors also ask if the child lives in a household where someone had TB disease. The child is given a skin test for TB. Wherever possible, sputum is collected from the child to check for TB germs. Sometimes, the sputum has to be got from stomach washings. Children are also tested for HIV if required.

Q: What are the symptoms of TB in children?
A: A child with TB usually has some of the following symptoms:

- A persistent cough that did not improve
- Weight loss or failure to gain weight
- Fever and/or night sweats
- Tiredness
- Reduced playfulness and less activity

A child with these symptoms is usually thought to have either a sore throat or malaria or malnutrition. If these symptoms continue for more than 2 weeks without improvement, especially if the child is already taking antibiotics for cough or anti-malarial treatment, the child needs to be tested for TB.

Q: If a mother has TB during pregnancy, will her child be at risk for TB?
A: TB in pregnancy or after delivery is common especially in HIV-infected women. When the mother has untreated TB, the chances of her death, and the infant's death is higher. Mothers with TB also give birth to babies with low birth weight. The risk of TB infection and disease to the infant of a mother with TB is extremely high.

Q: Do children mostly get lung TB like adults or do they also get extra pulmonary TB?
A: Extra-pulmonary TB is common in children. The child has symptoms depending on which organ is affected by TB. TB affecting the lymph nodes in the neck is the most common form of extra-pulmonary TB. Children over 5 years of age with TB in the abdomen will have swelling and fluid in the abdomen. Overall, the child loses weight over time.

Q: Is there no vaccine that can protect children against TB?
A: Newborns are given a TB vaccine called BCG. BCG cannot prevent the baby from getting TB completely. It is given to prevent TB from spreading throughout the body.

Q: Is TB in children and adults treated the same way?
A: The same type of treatment given to adults is given to children, but the dosage of the drugs is much less. The dosage of the TB drugs for each child is calculated separately according to the child's

weight. To treat TB in children successfully, doctors must follow the guidelines of the RNTCP. Doctors must notify the RNTCP about each and every child they treat for TB. Doctors also need to maintain careful records of each child's treatment and follow up till cure.

Q: What are the challenges you face in treating TB in children?
A: Sometimes families stop the child's treatment when they see the child getting better. They don't realise that the TB germs are still in the child and can make him sick again. To be cured of TB, the child must complete the full course of TB medicines as prescribed. The child needs medicines even if his symptoms go away. But many families don't understand this. We counsel the child and family about the importance of continuing the treatment till we say the child is cured and can stop taking the medicines.

Q: What must be done to prevent TB infected children from getting TB disease?
A: The BCG vaccine can help prevent severe TB disease throughout the body in children and babies under one year of age. Adults detected with TB disease must have their children or those who share the same household screened for TB. They must also inform the doctor about any signs of ill health in the child, so that the child can be screened for TB. Children found to have TB infection can be given Isoniazid Preventive Treatment for 6 months.

If you invite the Principal of the local school, you could ask her how she plans to educate her students about TB? How will she ensure that a child with TB is not discriminated against and is made to feel welcome in the school, while at the same time making sure all necessary precautions are taken?

If you invite the parent of a child with TB as your studio guest, you could ask him or he how they found out their child had TB? What special care do they give their child during the treatment process? What advice would they give to other parents who had children with TB?

KEY MESSAGES FOR LISTENERS

- **Adults with lung TB should cover their mouth when coughing. This can help protect babies and children from getting infected.**
- **Children should eat good, healthy food and be carefully observed for signs of ill health if there is someone in the household with TB disease.**

MODULE 3
TB and Drug Resistance

Nurse Sheelaben was worried.
She had 30 patients with TB disease under her care.
All were taking TB medicines through DOTS.
Most of them were getting better.

But Ram, Kaniya and Bishen continued to be very sick.
All were from her village.
They worked as masons at a highway construction site.
The site was 100 kilometers away.
The men stayed there working for a few days at a time.
They returned whenever they could to be with their families.
They could not take DOTS regularly.

Nurse Sheelaben had warned them that missing DOTS could worsen their TB.
But the men either forgot or did not listen.
Now, all three of them had become very ill.
They could not travel for work anymore.
They were back on DOTS.
But their cough had only gotten worse.

Dr. Ramya examined the sick men.
Nurse Sheelaben collected sputum from each of them.
The sputum samples were tested through GeneXpert.
The test revealed that some of the TB germs were able to multiply even in the presence of Rifampicin, an important TB drug.

Ram, Kanhaiya and Bishen had Multi-drug-resistant TB or MDR-TB.
MDR-TB was more difficult to treat.
Dr.Ramya told them that MDR-TB would not go away with the drugs they presently took.
The drugs they were taking were called first-line TB drugs.
Now she would change them to stronger drugs to treat their MDR-TB.
The new drugs were called second-line TB drugs.

Ram, Kanhaiya and Bishen would have to take the new medicines for 24 months.
Second-line drugs could cause them some discomfort.
They could feel sick or dizzy or have other side effects.

Nurse Sheelaben also explained that Ram, Kanhaiya and Bishen must be careful not to spread MDR-TB to others.
They should be careful to cover their mouth while coughing.
They should always carefully dispose of the sputum.
That was the only way they could protect their families, co-workers and friends from MDR-TB.

They must stay in a room with lots of fresh air.
They must **c**over their mouth with a clean cloth anytime they coughed, laughed or sneezed. They should collect these cloths in a bag, seal it and burn it or throw it away.

Ram, Kanhaiya and Bishen did not miss a single dose of the second-line treatment.
Sometimes they felt sick.
Dr. Ramya regularly checked their health.
After a few months of treatment, Ram and Kanhaiya got better. But Bishen did not.
Ram and Kanhaiya continued on treatment until they were tested and told they were completely cured.

Q and A

For this capsule, you could invite a TB specialist or a doctor from RNTCP as the studio guest. You could also invite a patient with MDR-TB or his or her family member. Below are some potential questions you could ask the TB specialist.

Q: Are there different kinds of drug resistant TB?
A: Someone with TB germs that resist only one TB drug is said to have monodrug resistant TB.
Some people have TB germs that are resistant to the two most effective drugs in the first-line treatment. The drugs are Isoniazid and Rifampicin. Such people are said to have MDR-TB.

Some people who already have MDR-TB also have TB germs that can resist other important TB drugs called Fluoroquinolones. In addition, the germs are also resistant to any one of the injectable second-line drugs Amikacin, Capreomycin and Kanamycin. People with TB germs that can multiply in the presence of so many powerful TB drugs are said to have XDR-TB or extensively drug-resistant TB.

Q: Are there many cases of MDR-TB in the world?
A: About one in every 30 people with TB has the MDR variety. In some countries there are very high rates of MDR-TB. In a country called Belarus, for example, about one out of every three people newly found to have TB has the MDR variety.

Q: What is the MDR-TB situation in India?
The WHO estimates that India has about 99,000 people with MDR-TB. India has one-fifth of the global burden of people living with MDR-TB.

Q: Why is it difficult to treat MDR-TB?
A: Firstly, it takes much longer to complete DOTS with second-line drugs – treatment for MDR-TB can take up to two years. Secondly, second-line drugs have more side effects, and makes it more difficult for the patient.

Q: Is second-line treatment expensive?
A: Second-line DOTS is provided free of charge by the RNTCP. The government spends close to two lakhs for a full course of second-line drugs for a patient.

Q: Why are the numbers of people with MDR-TB and XDR-TB rising?
A: There are three reasons for this: people who have drug-resistant lung TB can spread drug-resistant TB to others. Someone whose lungs have TB germs that are able to resist the various TB drugs sprays the drug resistant germs into the air when coughing. Whoever breathes in those germs, gets infected with drug resistant germs.

Another reason for the spread of MDR-TB is that patients sometimes do not complete their treatment. When patients skip their doses of TB drugs, the TB germs do not get cleared from the lungs, but continue to multiply. This is called non-compliance or failure to adhere to treatment. The new germs that are born are armed with special genes that help them to remain unaffected by various TB drugs. That is why we use a combination of drugs to hit the germs hard and kill as many as possible as quickly as possible.

A third important reason for the increase in drug-resistant TB is to do with doctors who prescribe treatment. When doctors do not give the correct dosage to the patients or do not ensure that the patient continues with treatment till he is cured, drug resistance can develop.

Q: What should be done to meet the challenge of MDR-TB in India?
A: All the districts in the country have Programmatic Management of Drug Resistant TB (PMDT) services. The RNTCP is increasing the testing facilities for drug-resistant TB as well. In 2013, for instance, almost two lakh people were tested for MDR-TB and over 20,000 were started on treatment for drug-resistant TB. The treatment is provided completely free for the patient. The RNTCP is also taking an extra step to support patients by appointing counsellors at DR-TB centres. These counsellors can play a very important role in making sure patients complete treatment.

At the national level, we also need political leaders to give importance to the challenge of MDR-TB. They need to allocate more resources to diagnose and treat MDR-TB. The private health sector needs to participate in the national effort to control MDR-TB.

KEY MESSAGES FOR LISTENERS

- **Never skip even a single dose of your TB treatment.**
- **If you have MDR-TB, always cover your nose and mouth with a clean cloth when you cough or sneeze.**

Radio Spotlight 3: Completing treatment

Rosie had waited for Nazreen Begum since dawn.
It was now almost 7 AM.
Sewri had come awake in that time.

Boys cycled past on their newspaper delivery rounds.
The milk vendors had covered nearly half the houses on the street.
The jalebi stall owner was already at work.
Rosie could smell the fresh jalebis where she stood at the entrance of a narrow lane that led off the street.

Nazreen Begum usually emerged from a tiny house in there.
She was one of the many weavers who lived in this part of town.
She had been diagnosed with TB a month ago.
The doctor had started her on first-line TB drugs.
Rosie was her DOTS provider.
Nazreen hated to swallow her TB medicines.
They made her gag and vomit.
Rosie patiently counseled her each time.
She ensured that Nazreen took her DOTS regularly.

Rosie entered the lane.
She knocked on Nazreen's door.
Nazreen's husband Wasifbai answered her knock.
Nazreen had gone to attend a wedding in Malda.
She would return in a week's time.

Wasifbai said that Nazreen was happy to escape her TB medication for a week.
Rosie reported back to the DOTS center.
Nazreen would need counseling to ensure she stuck to DOTS through the full course.

By the time Nazreen returned from Agra, it was more than two weeks.
She had gained weight.
She told Rosie that she did not need TB medicines any more.
Her cough was better.

Rosie counseled her again.
If Nazreen missed her doses of TB drugs, the TB germs in her lungs would not get killed.
They would multiply again.
And this time, there may be new TB germs that could resist the drugs Nazreen was taking.
Nazreen would get a type of TB that was harder to treat.
It was called Multi-drug-resistant TB or MDR-TB.
Nazreen paid careful attention to Rosie's advice.
She resumed her TB medication.
But not for long.

The very next week, Nazreen left for Agra to take care of her ailing mother.
She did not inform Rosie.
This time she missed her medication for two months.
She resumed her TB medication only when she returned to Sewri.
The weeks of strain taking care of her mother had made Nazreen lose weight.
Her cough came back and she felt sick.

After another month, Rosie took her to the doctor for a check up.
After testing her sputum the doctor told her that her TB germs were resistant to not only Rifampicin and Isoniazid but also to Fluoroquinolones, which were powerful second-line drugs for TB.

Nazreen had a type of TB that was extremely resistant to treatment.
It was called XDR-TB.
She had not listened to the advice of her DOTS provider.
She had missed her TB medication many times.
Her TB germs had learnt to resist the best TB drugs that were available.

Nazreen was started on treatment for XDR-TB.
A counselor visited her almost every day and provided her support.
Nazreen had to take many second-line drugs to kill the TB germs inside her.
But she told Rosie it was a battle she was going to fight and win.
She did not miss a single dose of her DOTS this time.
She knew she was fighting for her life.
Wasifbai cooked Nazreen nutritious food.
He took care of the household chores.
Nazreen felt better with his support.
Nazreen's mother prayed for her to get better.

After many weeks, Nazreen's tests showed she was getting better.
Nazreen today has recovered her health.
She did win her silent battle against drug-resistant TB.

Taking her DOTS regularly, without missing even one dose was what cured her.
But if you asked Nazreen today, she would rather have completed her TB treatment the first time she had the disease.
That is her advice to anyone with TB – finish your course of treatment and do not stop in the middle, even if you feel better.

MODULE 4
The socio-economic impact of TB

Tuberculosis affects everyone.
Babies, children, men and women can all get infected with TB germs.
Those who are weaker can fall sick with TB disease.
Sometimes working adults who are sick with TB, feel very ill.
They feel too sick to go to work.
They lose wages and income.

Every single day, 750 people die of TB in India.
Each year, TB kills three lakhs Indians mostly between the ages of 15 and 45.
Most are working, earning adults.
Each year, an estimated 10 crore workdays are lost due to illness.
Each year more than a 130 crore workdays are lost due to TB deaths.
This is how TB can make families and communities poorer.

The cost of detecting and treating people with TB costs India Rs.30 crores every year.
The indirect cost of TB is about Rs.300 crores each year.
This is how TB can make the country as a whole poorer.

Sivalingam is an auto-rickshaw driver.
He earned enough to feed his family and educate his children at a private school.
When his back began to hurt, he went to a private clinic for treatment.
He spent heavily on tests and medicines.
But his backache did not improve.
The doctor told him he needed more tests.
But Sivalingam's savings were all spent.
He could not afford more tests.
He sold his auto-rickshaw.
He took the tests recommended by the private doctor.
He was finally diagnosed with TB of the backbone.
He had to take TB drugs to get better and be cured.
The TB drugs were very costly.
He shifted his children from the private school where they studied to a government school which was free of charge.
With the money he saved, he could finally afford the treatment.
TB diagnosis and treatment through private doctors and clinics is a costly affair.
It can drive poor families deeper into poverty.

The government through the RNTCP diagnoses people free of charge.
The RNTCP also gives free treatment through DOTS for people with TB.
But even under the RNTCP, TB patients do spend money out-of-pocket.

The Tuberculosis Research Center in Chennai (now called the NIRT) has researched TB for more than 50 years.

They studied some of the ways in which TB can affect the families and their finances.
The out-of-pocket spending by TB patients amounted to about Rs.13,000 crores for the country as a whole every year.
More than one out of ten children of family members with TB dropped out of school.
They had to take care of their parents who were sick with TB.
One out of every five children went to work to feed the family, mainly if the father had TB.
Each year about three lakh children in India drop out of school to take care of parents with TB.
It is tragic that more than half of TB patients in the RNTCP are poor to begin with.
TB makes them poorer.
If they went to the private sector for treatment, they went deep into debt.

TB is curable.
But left untreated, patients can infect 10-15 persons each year.
Poorly treated patients develop drug resistant TB.
MDR and XDR-TB are difficult to cure and cost many times the amount it takes to cure TB with first-line drugs.
People can get free and proper diagnosis and treatment through RNTCP.
They can avoid the heavy costs of improper tests and improper, incomplete treatment.
For India to control TB successfully, each of us needs to be aware of the basic facts about TB.
But it is not enough to simply be aware.
It is time to act now, before it is too late.

KEY MESSAGES FOR LISTENERS

- **The earlier TB is diagnosed and treated, the less expensive it is for the family, the community and the country.**
- **The RNTCP provides TB diagnosis and treatment free-of-charge.**

Radio Spotlight 4: TB and Stigma

Satya was going to become an engineer.
She was in the 10th standard of a school in the Kodambakkam area in Chennai.
She was a hardworking young girl.
When she fell sick no one thought it would be TB.

But the doctor had diagnosed her with sputum-negative TB.
He explained that though the sputum test was negative, Satya still had TB germs in her lungs and would need treatment.
She could not infect others.
She could go to school as usual.
Satya began to take treatment from the government hospital.
She soon felt better.
She continued her treatment and went back to school.

But the teacher sent her home.
She feared that Satya might spread TB to the other children.
Satya's Treatment Supervisor met the principal of her school.
She explained to the principal that Satya was not infectious to the other students.
Satya was not coughing out TB germs.
And she had started treatment.
Satya was allowed to attend classes again.
But her teachers made her sit separately.
She was not allowed to write her exams, because she had missed many days of school.

Some people fear TB because of wrong beliefs about the disease.
Because of this, people with TB are sometimes shunned by their families and community.
But instead, we should give people with TB the care and support they need to defeat the disease.

Sheela Augustine works at an NGO dedicated to the fight against TB.
Sheela is an expert counselor and community educator.
She explains that there are many myths and misconceptions around TB.
Many people don't know that TB can be cured.
Many think that TB can spread by sharing food and water. But this is not true.
People with TB are sometimes not welcome at community gatherings.
Social rejection causes them intense mental anguish.

Needless fears about TB could also break relationships.
Sheela has met many people with TB who had been rejected by their own families.
Some patients are asked to leave the house till they are cured of TB.

Kannan works as a mechanic on the outskirts of Chennai.
When he fell ill, he visited the nearby government hospital.
He was diagnosed with TB.
He turned to his brother for support.

But his brother asked him to leave the house and to seek care from a healer in the nearby town of Kancheepuram.

Vasanthi is a newly married young woman.
Her husband abandoned her.
He had learnt that she had been diagnosed with TB of the uterus.

Regina Mary was bedridden for weeks.
TB disease made her too ill to walk around without help.
Her husband told her he was going to marry Regina's sister.
He thought Regina would never recover from TB.

Some people with TB feel ashamed to have such a disease.
They fear their families or communities will isolate them.
Asma was a young wife who lived with her husband and in laws.
She was diagnosed with TB disease.
She could not tell her husband or his parents that she was ill with TB.
Through the months of treatment, she secretly took DOTS from her mother's house.

Jeyanthi was very thin.
Her husband said she looked like a TB patient.
He taunted her often.
Jayanthi was diagnosed with TB disease.
She decided not to tell her husband about her disease.
She feared that he would throw her out of her house

Each year, about one-lakh women in India are rejected by their families.
Sheela helps people with TB cope with their illness.
TB patients are greatly helped by proper counseling.
For women, the counseling is also available at self-help groups.

KEY MESSAGES FOR LISTENERS

- **Each one of us can speak out and offer support to people with TB.**
- **Communities can stop TB by sharing information about the disease.**
- **The more support a TB patient gets from his family and friends, the better are his chances of recovery.**

MODULE 5
Is everyone at risk of getting TB disease?

Pervez was late for college.
The bus was crowded with students, vendors, office-goers and school children.

Everyone seemed to have a cold.
The conductor coughed into the bus tickets as he gave them to passengers.
A lady carrying a shopping bag sneezed into Pervez's face.
Even the schoolboy who was pressing against Pervez's stomach got a cough out before blowing his nose on his sleeve.

Pervez immediately tied his handkerchief round his mouth and nose.
Last week, his college had begun TB awareness programs in his village on the outskirts of Srinagar.
He and his friends had been trained to teach the villagers about TB.

Pervez had learnt that TB germs spread through the air.
You got infected with TB germs simply by breathing them in.
Every year, about 20 lakh people in India fell sick with TB disease.
8 lakh people had TB germs in the sputum they coughed out.
They were called sputum positive patients.
They could pass on TB to others.
Just a single person with lung TB, who was coughing TB germs into the air, could spread TB germs to ten to fifteen people, if left untreated.
Pervez had learnt that everyone who breathed in TB germs got infected with TB.

The RNTCP estimated that about 4 out of every ten people in India were infected with TB germs.
But not everyone who was infected with TB germs got TB disease.
Healthy people had strong defenses in the body to fight off the TB germs.
The body defended itself from sickness with the help of warrior cells, proteins and vessels called the immune system.
The doctors had explained that TB germs could multiply and make you sick only if the immune system was weak.
The body's ability to fight the TB germs could get weakened because of many factors.
These were called the risk factors for TB disease.

An important risk factor was low body weight.
The body needed nourishing food to fight off diseases.
Thin, malnourished people had weak immunity.
TB germs could easily make them sick.

Certain diseases also made your immune system weak.
Having these diseases put you at higher risk of falling sick with TB.

- HIV infection which leads to AIDS
- Diabetes
- A lung condition called silicosis

- End-stage kidney disease
- Those receiving steroid treatment
- Certain cancers

The doctor had also explained that medicines taken for cancer or joint pain could also weaken the immune system.
Babies, children and elderly people also had weak immune systems.
TB germs could easily make them sick.

Pervez's village had only one PHC or primary healthcare centre.
Most of the villagers did not know much about TB.
Most were poor.
Many were thin and poorly nourished.
If they fell ill, many sought the help of the local healer.
Pervez and his friends had explained to them that a cough for more than two weeks could be TB.
The villagers had to go to the PHC and get themselves checked.
Smoking tobacco also weakened the lungs.
Someone who smoked 20 cigarettes a day, more than doubled his risk of falling ill with TB.

Pervez got off the bus at the gate of his college.
That afternoon, his friends and he visited the refugee shelter run by a local NGO nearby.
The NGO worked with the government hospital to detect people with TB in the refugee camp.
Many of the refugees were sick with TB.
They had become weak by poor nutrition and ill health.
The doctors had explained that in prisons too, poor ventilation, overcrowding and poor nourishment made people sick with TB.

Pervez and his friends distributed food packets and clean water in the camp.
They taught the patients that it was important to wash their hands regularly.
The NSS program in Pervez's college works to inform people about the many risk factors that can turn TB infection into TB disease.
It is not only important to protect oneself from getting infected with TB.
It is also important to maintain good health to protect oneself from falling sick with TB disease.

MODULE 6
TB and Nutrition

By the time Beenamol arrived at her self-help group meeting, it had already started.
The women were sitting around a table in the center of the room.
She sensed excitement in the air.
Sophie pulled her into the crowd.
Someone thrust a box of matches into her hand.
She was asked to light the stove on the table.
Beenamol lit the stove and Sophie placed a pan of hot water on it.
She stirred a brown powder into it.
Soon the room was filled with the aroma of millets.

The women in Beenamol's self-help group had perfected a recipe for a new porridge.
The porridge flour was ground from roasted millets like ragi, corn and maize.
These millets were traditional foods.
They had been edged out of people's diets by rice, wheat and ready-made foods.
The women added jaggery to the porridge.
They garnished it with crushed peanuts.
Beenamol was given the first bowl to drink.
She felt honored.
She even felt strong.

Two months ago, the women in the self-help group had found Beenamol lying unconscious by the road leading to their village.
She was skin and bone, literally.
They had taken her to the hospital.
The doctors gave her intravenous fluids and nursed her.
Beenamol said her husband had abandoned her.
She had been diagnosed with TB.

The doctor explained to the women that Beenamol was so malnourished that she may not survive.
Underweight, malnourished people had weakened immunity.
TB germs could multiply rapidly in the bodies of weak, malnourished people.
Beenamol needed nourishing food, if she was to survive TB.
Beenamol was started on DOTS.
Often she would vomit her medication.
She was very weak.
Sophie and the women in the self-help group were determined to save Beenamol.
They had taken some classes on nutrition.
They had learnt that local millets were rich in nutrients.
The porridge recipe they developed was delicious.
More importantly, it was wholesome and nutritious.

Sophie and the other women in the self-help group took Beenamol under their care.
They took turns to feed her.

It was many weeks before Beenamol regained her strength.
Beenamol's Treatment Supervisor was happy with her progress.
She asked whether Sophie and her team would supply porridge flour to other TB patients under her care too.

Today, Sophie's self-help group generates income for its members by making and selling their porridge flour.
The women are happy that they are able to generate income for themselves.
They are happy that the porridge they supply helps people with TB to have a nutritious diet during their treatment.
The person, who is happiest of all, is Beenamol, the newest member of their group.

Q and A

For this episode, you could invite a nutritionist or a member of an NGO that provides nutritional support to TB patients.

Q: Do TB patients need supplementary nutrition to respond to DOTS better?
A: So far there is no evidence to show that the routine provision of food or energy supplements results in better TB treatment outcomes, or improved quality of life.

Q: So a normal diet is sufficient for people with TB?
A: Yes, but the question is how many people with TB have sufficient food to eat. It is well established that people who are underweight are more at risk of falling sick with TB. An adequate diet, containing all essential macro- and micronutrients, is necessary for the well being and health of all people, including those with TB infection or TB disease. The WHO says that nutritional support should be a part of TB prevention and care.

Q: Why does your NGO provide nutritional support to TB patients?
A: We often come across patients who are malnourished at the time of TB diagnosis. We give such patients nutrition assessment and assistance. But TB diagnosis and care are our priorities.
The nutritional status of the patients is a good indicator of how they are responding to treatment.

When patients on DOTS continue to lose weight or fail to regain normal weight, we check them carefully for other diseases. We check whether they are failing to take their medications properly or whether the TB has become resistant to the drugs they are taking,

Q: What other diseases do people with TB commonly have?
A: People with TB usually have either HIV or diabetes. Many TB patients also smoke, consume alcohol or are addicted to substance abuse. All of these diseases, which could appear together with TB, have their own nutritional implications. That is why TB patients should be given nutrition screening, assessment and counseling.

Q: The most numbers of people with TB in the world are found in some of the poorest countries, where hunger is a huge problem.
A: Poverty and food insecurity are both causes and consequences of TB. TB prevention and care programs are an important opportunity to recognize and address these wider socioeconomic issues.

Q: What about children with TB?
A: Children who are less than 6 years of age with active TB and moderate under nutrition should be given the suitable nutritional supplements. This includes provision of locally available nutrient rich or fortified supplementary foods, in order to restore appropriate weight-for-height.

Q: What kind of nutritional support do pregnant women with TB need?
A: All pregnant women with active TB should get multiple micronutrient supplements that contain iron and folic acid and other vitamins and minerals.

If her calcium intake is low, calcium should be given as part of antenatal care, particularly for pregnant women at risk of high blood pressure.

Breastfeeding mothers with TB disease should be given iron, folic acid and other vitamins and minerals.

A pregnant woman with TB disease who is underweight or is not gaining weight normally should be given locally available nutrient rich or fortified supplementary foods. She must gain an average of about 300 g every week from the fourth month of pregnancy onwards.

Q: Do people with MDR-TB need additional nutritional support?
A: They do not require additional nutrition if their nutritional status is normal. But they need to be carefully monitored for signs of weight loss.

Patients with multidrug-resistant TB disease and moderate under nutrition need locally available nutrient-rich or fortified supplementary foods, as necessary to restore normal nutritional status.

Q: Do all underweight people need to be checked for TB?
A: That may not be practically possible. But when someone is diagnosed with TB, it is worthwhile to do a nutrition screening and assessment of the members of his or her household. If there are malnourished people in the same house as someone with lung TB disease, they may be a higher risk of developing TB disease too. They can be protected with nutritional support.

KEY MESSAGES FOR LISTENERS

- **TB germs can cause disease easily in malnourished and underweight people.**
- **Maintaining normal body weight and eating a nutritious diet can help people withstand the TB treatment better.**

MODULE 7
TB and Diabetes

Kishen chacha missed his walks.
He loved to stroll in the park near his home every morning.
But of late he had not been sleeping well.
Each night, he felt feverish.
He would get up every other hour.
He had to go to the bathroom and pass urine.
And there was this thirst that would not go away.
He coughed and coughed and felt tired all day long.

Kishen chacha's wife Madhu took him to the hospital.
The nurse checked his temperature.
The doctor checked Kishen chacha's breathing with his stethoscope.
Kishen chacha's blood and urine were sent to the lab to be tested.
The results came next day.
Kishen chacha had too much sugar in his blood, the doctor said.
The condition was called diabetes.
It was common in older people who were overweight.
The doctor also explained to Madhu and Kishen chacha that diabetes lowered the body's defenses against germs.

Germs loved sugar.
They could multiply rapidly in sugar rich blood and tissues.
Too much sugar in the blood could also make it difficult for the body to fight infections effectively.
People with high blood sugar were two and half times more likely to fall sick with TB disease.
The higher the blood sugar the greater the risk, of falling sick with TB.
So he would check to see if Kishen chacha had TB.
The nurse made him cough some phlegm from deep in his lungs into a cup.
They took an X-ray of his chest too.
The lab found TB germs in Kishen chacha's sputum.
He was sick with tuberculosis as well.

The doctor gave Kishen chacha medicines to control his blood sugar.
He had to take the medicines regularly, all his life.
The doctor also put Kishen chacha on DOTS.
He arranged for Kishen chacha's neighbor to watch him swallow his TB medicines regularly.
Madhu and Kishen chacha listened carefully to the doctor's advise.
Take the diabetes medicines every day.
Eat nutritious food.
Cover your mouth and nose when coughing.
Never miss a single dose of DOTS.

Madhu cooked Kishen chacha nutritious food.
She ensured that he took his diabetes medicines regularly.

Kishen chacha and Madhu enjoyed the fresh air in the park.
Their neighbor made sure that Kishen chacha did not miss a single dose of DOTS.
Kishen chacha's health began to improve in a few weeks.
He slept better.
His cough went away.
He had shed some extra weight.
He felt energetic.
He resumed his morning walks.

The doctor tested him some months later.
His sugar was under control.
But Kishen chacha needed DOTS for a few weeks more.
He continued on DOTS.
The doctor tested Kishen chacha after some weeks.
Kishen chacha had successfully completed DOTS for six months.
He was cured of TB.
Kishen chacha today leads a healthy life.
He never misses his diabetes medicine.
Or his walks.

Q and A

For this episode, you could interview a Diabetes specialist (Diabetologist) or a person with diabetes and TB.

Q: Is it harder to treat TB in someone who has diabetes?
A: Yes, Diabetes lowers the body's defenses. So it becomes difficult to get rid of the TB germs. It increases the length of time that you are infectious. So the TB drugs take a bit longer to work, to make you noninfectious.

Also, people with diabetes have a higher risk of failing TB treatment. Diabetics with TB have nearly five times more risk of dying during TB treatment than those who are not diabetic.

Q: Is it harder to control blood sugar when someone is sick with TB?
A: The initial stages of tuberculosis may produce higher levels of sugar in the blood. As TB treatment continues, the high blood sugar decreases. An important TB drug called Rifampicin may reduce effect of anti-diabetic drugs.

Q: If the blood sugar is kept under control, is it easier to treat TB?
A: Yes. Better control of blood sugar makes the TB treatment work better.

Q: How big is the problem of diabetes?
A: Diabetes is a growing challenge. In 1980 it was estimated that about 15 crore people in the world had diabetes. By 2013, that number more than doubled. Researchers predict that by 2030, there may be 60 crore people with diabetes. Another 60 crore would be pre-diabetic.
In India about 8 out of every 100 adults over 20 years suffer from diabetes.

Q: Does diabetes run in families?
A: Yes. The chance of developing diabetes is higher when there is a family member with the disease. The genes you have determine whether you are likely to develop diabetes.

In India people get diabetes at a much younger age than in some Western countries. Middle class lifestyles are changing to include richer food intake and far less exercise than earlier generations were used to.

Q: Is the popularity of fast food a factor in the rise of diabetes in India?
A: Fast foods are high in carbohydrates and unhealthy oils called trans-fats. People eat fast foods along with sweet sodas that are very high in sugar. Both are leading causes of obesity and diabetes in India.

Food companies promote processed food and sugary drinks through unhealthy advertising on television. Exercise is also a shrinking option for people in cities where there are very few parks and safe walking passages.

Q: If I have high blood sugar, should I get tested for TB?
A: All patients with TB should be screened for diabetes. All patients with diabetes need to be screened for symptoms of TB.

Q: Are TB patients screened for diabetes at government hospitals?
A: TB testing and treatment through DOTS is handled by the Revised National TB Control Program. The National Program for the Control of Non Communicable diseases handles diabetes prevention and control. The two programs are working together through a system of coordination. The goal of coordination is to improve detection and management of TB in patients with diabetes and to improve detection and management of diabetes in those with TB.

Qs suggested for person with diabetes and TB:
How did you find out that you had TB?
How many years have you had diabetes? How do you maintain your blood sugar?
Describe your experience being on TB treatment.

KEY MESSAGES FOR LISTENERS

- **Diabetes more than doubles the risk of falling ill with TB.**
- **If you have TB, get tested for diabetes.**
- **If you have diabetes, get tested for TB.**

MODULE 8
TB and HIV

Dr. Ravi was on his rounds.
It was quiet in the women's ward of the Government Hospital for Thoracic Medicine.
The hospital was a center of excellence for the treatment of TB.
Thousands of people with TB had been successfully cured at this hospital.
Many of them were infected with a virus called HIV.
HIV was a germ that weakened the body's immunity to diseases.
People with HIV germs easily fell sick with other infections.
The most common disease people with HIV got was TB.

Sumathi is 34 years old.
She was diagnosed with TB at this very hospital some days ago.
She is a housewife.
Her husband transported goods on his truck for a living.
He had died of AIDS last year.
Sumathi lived with her parents.

After speaking with her, Dr. Ravi had referred her to be counseled about taking an HIV test.
Sumathi had tested positive for HIV.
The virus had been eating away at Sumathi's immune system.
Her body's defenses had weakened over many months.
She had no idea why she seemed to catch a cold so easily.
She also suffered frequent bouts of diarrhea.
It was only when cough and fever racked her body that she decided to go to the hospital.
TB germs had been multiplying in her weakened body.
They had caused some damage to her lungs.

To get better, she needed TB drugs to kill the TB germs.
She also needed HIV drugs to kill the HIV germs.
Sumathi was frightened to learn that she had TB/HIV.
She thought she would not survive.
The counselor had explained that HIV was not a death sentence.
You could live a long and healthy life despite being HIV positive.
Sumathi's TB was also curable.
Sumathi's parents took turns to take care of her.

India has about twenty-four lakh people living with HIV.
One out of every twenty new patients diagnosed with TB has HIV as well.
People infected with HIV (the virus that causes AIDS) are two and half times more likely than uninfected people to get sick with TB.
In 2013, the government detected HIV in 120,000 people with TB.
India is one among 41 countries in the world that have a large number of people with TB/HIV.

The government runs a countrywide program to control HIV/AIDS.
It is called the National AIDS Control Program or the NACP.
The NACP gives people free HIV counseling and testing services.
The services are given through special clinics called Integrated Counseling and Testing Centers or ICTCs.

Anyone over the age of 14 years can get counseled and tested for HIV for free.
If a person tests positive for HIV, they may need treatment.
The drugs given to kill the HIV germs are called Anti Retroviral drugs.
Treatment for HIV infection is called Anti Retroviral Treatment.
The government provides the treatment free of charge through ARTS Centers.

The RNTCP and the National AIDS Control Program work together.
Their goal is to detect people with TB/HIV as early as possible.
The workers at the ICTCs and the ART centers carefully check people for signs and symptoms of TB.
People with suspected TB are sent to the RNTCP for sputum microscopy and other tests.

The RNTCP also counsels and refers people to the ICTCs for HIV tests.
People with TB get free treatment from the RNTCP.
People with TB/HIV are able to get free treatment for HIV infection as well.
The RNTCP and the NACP also work together to keep people with HIV from falling sick.

Since 2015 the Government also gives Isoniazid Preventive Treatment (IPT) to people detected with HIV.
IPT helps protect HIV positive people from falling sick with TB.
Most of them are also given the drugs called Cotrimoxazole Preventive Therapy or CPT to protect their lungs against other infections.

Being HIV positive is not the end.
Those with TB/HIV can get cured of TB.
The package of TB/HIV package of services is available free across the country.
All we need to do is to use it.

Q and A

For this episode, you could interview a HIV specialist or a Counselor or someone with HIV who has been cured of TB.

Q: How big is the problem of HIV-TB?
A: TB is the leading cause of death in people living with HIV. One out of every four people living with HIV in the world die of TB.
People with HIV who have TB infection are 20-40 times more likely to develop active TB. If their TB is left untreated, it kills people living with HIV within weeks.

Q: Why are people with HIV more likely to fall sick with TB?
A: HIV weakens the immune system. This makes it possible for latent TB infection they have to progress to active TB disease. People living with HIV are up to 40 times more likely to develop TB

disease over their lifetime compared to people who are HIV negative. HIV also increases the chance of relapse in previously treated TB patients.

Q: Why is it important to know if I have TB and HIV infections?
A: HIV infection weakens the immune system. If a person's immune system gets weak, TB infection can become TB disease. Someone with TB infection and HIV infection has a very high risk of developing TB disease. Without treatment, these two infections can work together to shorten the life of the person infected with both.

Q: How can people with HIV avoid falling sick with TB?
A: TB infection can be kept in check and prevented from developing into TB disease by taking preventive treatment. Those with TB disease can be cured by treatment.

Q: Should someone with TB disease take the HIV test?
A: Doctors recommend that anyone with TB should take an HIV test. The sooner someone is diagnosed with HIV, the better the chances of treatment and care.

Q: Are children with HIV infection more likely to get TB?
A: Children with HIV infection are at a high risk of TB disease in communities where TB is widespread.

Q: H**ow do doctors diagnose TB in HIV positive children?**
A: Lung infections of all kinds are common in children with HIV. It is not easy to diagnose if the cough and fever is due to TB or other infections. Along with checking the child, the sputum is checked for TB germs. Only then can it be confirmed whether the child's cough is due to TB or not.

Q: Can the TB vaccine BCG protect HIV infected babies from TB?
A: HIV positive babies under the age of one year face the risk of getting TB disease and dying from the BCG vaccine itself. Infants should be started on ART as early as possible. An infant on ART can be given BCG, because ART reduces the risk of the baby falling sick with TB.

KEY MESSAGES FOR LISTENERS

- **HIV infection increases the risk of falling sick with TB.**
- **If you have TB, get tested for HIV.**
- **If you have HIV, get tested for TB.**
- **TB is fully curable in people with HIV infection.**

PART 2: THE RADIO SKILLS SECTION

Module 9
Researching for a radio program on TB

- **Understand the value of research for your story on TB.**
- **Identify sources of information on TB.**
- **Practice basic research on the internet to get quality TB information.**

Why is research valuable for your radio story on TB?

A good radio program on TB requires a lot of research.

You cannot talk to listeners about TB if you yourself don't know much about it.

Listeners need basic facts about TB.

They need to know what TB is.

They need to know how it spreads and how it can be diagnosed and cured.

Listeners need information about where they can reach TB services.

Informed listeners are better placed to make better health choices.

The more you research the topic, the more you understand TB. When you understand TB information, it helps you explain TB to your listeners clearly and simply.

The more you research the topic, the more comfortable you become talking about it.
Research helps you sound confident about the subject.

Radio programs on TB that can engage the listener depend on attractive storytelling.
Research helps you come up with creative story ideas.

Research also helps you find the suitable interviewees for your radio shows. Research helps you choose which experts, patients, healthcare workers, pharmacists, NGO workers and community members are qualified and credible and can communicate effectively.

Exercise: Research the Internet to get authentic TB information and identify sources

1. Click on the Internet Explorer/Mozilla Firefox/Safari/Chrome icons on your computer to access the internet. You can then use search engines to research on a TB topic on the internet. Google (www.google.com) and Yahoo! Search (http://search.yahoo.com/) are popular search engines.

2. Using the Google search engine, type the letters 'tuberculosis cure' into the search window. Observe the websites that appear. Choose one; for example, the following link.

Tuberculosis (TB) - Treatment - NHS Choices
www.nhs.uk/Conditions/Tuberculosis/Pages/Treatment.aspx
Click on the 'About' tab on the page.
The 'About' tab usually gives information on who the author of the site is. This is an important part of your research.
Next, narrow your search to get specific information, for example "tuberculosis cure children". Click on the example link below.

WHO | Tuberculosis treatment in children
www.who.int/childmedicines/tuberculosis/en/
Explore the information on the page. Take notes as you read. The page also gives a link to 'Advocacy'.
http://www.who.int/childmedicines/advocacy/en/
The link opens a page that tells us that although the TB drugs for adults and children are similar, children need specially formulated TB drugs that are suitable for their lesser weight and are easier for them to take.

Click on the Q and A link on the page. http://www.who.int/childmedicines/questions/en/The page explains more about the need for medicines that are suitable for children.
Examine the notes you took from each website. What ideas come to your mind when you go through the information?
Perhaps you want to know whether your local DOTS centre has specially formulated TB drugs for children. You may want to speak with the local pediatrician to understand how he or she treats children with TB.

At the end of this module, you will find a tip sheet called 'Useful websites on TB'. Click on a few websites and explore them. Make notes about which one is easy to access for TB data, which one gives basic TB facts in a simple way, which one to go to for TB news, and so on. These notes will help you save time, when you are racing to meet a deadline.

Read the tip sheet titled 'Tips for Using Google'. Practice some of the search tips such as entering words with and without inverted commas. For example, if you enter "TB drugs" within quotation marks, only entries with those two words appearing exactly in that order will appear. If you enter the same words with no quotation marks, you'll get entries with various combinations of that phrase.

SUMMARY

- **A good radio program on TB needs lots of research.**
- **Research helps you get accurate information for your stories.**
- **Research helps you find good story ideas.**

TIP SHEET 1: USEFUL WEBSITES ON TB

TBC India
www.tbcindia.nic.in
This is the official website for the Revised National Tuberculosis Control Programme in India and an excellent resource for recent data and information on TB in the country.

Stop TB Partnership
www.stoptb.org
The Stop TB Partnership is a unique and collective international force of over 1300 partners that aim to transform the fight against TB in more than 100 countries. They include international and technical organizations, government programmes, research and funding agencies, foundations, NGOs, civil society and community groups and the private sector.

International Union against Tuberculosis and Lung Disease
www.theunion.org
The Union strives to find innovative solutions and give expertise and support to address health challenges in middle and low-income countries. Headquartered in Paris, it has around 10,000 members across 145 countries. The Union South-East Asia Office leads the implementation of Project Axshya in 300 districts around the country.

Project Axshya
http://www.axshya-theunion.org
Project Axshya is a Global Fund Round 9 civil society initiative to support and strengthen TB care and control in India. Launched in 2010, it focuses on advocacy, communication and social mobilization activities through a national network of partner organisations (including REACH) who will implement them in their respective states and districts through their own sub-networks.

National Institute for Research in Tuberculosis
http://www.nirt.res.in
The National Institute for Research in Tuberculosis (formerly known as Tuberculosis Research Centre) is an internationally recognised TB research centre. It is a Supranational Reference Laboratory and collaborates with the WHO for training and research.

Partnership for TB Care and Control in India
www.tbpartnershipindia.org
The **Partnership** brings together organisations across the country on a common platform and seeks to harness the strengths and expertise of partners in various technical and implementation areas, and to empower affected communities, in TB care and control.

TIP SHEET 2: TIPS FOR GOOGLE SEARCHES

- Be specific about what you are searching for. For example, if you are looking for apple, be specific that it's the fruit you would like to know about. Type something like *apple nutrition*. If you type in apple on its own, you will get everything from the actual fruit to *Apple* computers, leaving you with a lot to sift through.
- Instead of typing your query in the form of a question, type it in the form of an answer and use an asterisk (*) for the word you don't know. For example, instead of asking "how many calories does an *apple* have?" type in "an *apple* has * calories."
- You can double your search effectiveness by simply using the "search within results" link at the bottom of any Google results page. This will help you narrow your results to find the really relevant pages.
- To save you clicks, Google offers an "I'm Feeling Lucky" button that takes you directly to the page that would appear at the top of your results.
- Bear in mind that searching on singular nouns will give you different results from plural nouns. For instance, searching for *apple* will yield different results from *apples*.
- The order of your search words matters. The first word is considered most important, followed by the second, and so on – so select your first word carefully.
- To stay speedy and focused, leave out such "little" words as I, where, how, the, of, an, for, from, it, in, and is, because Google ignores them.
- Google ignores most punctuation except apostrophes, hyphens, quotation marks, and two periods in a row (e.g., 400..600 thread count or 200..300 watt bulbs).
- On the other hand, Google recognizes many spelling variations. For example, if you enter *bowtie*, it will search for both *bowtie* and *bow-tie*.
- Instead of using the word *not*, use the dash/minus sign (-) to indicate that you don't want a certain term to appear in your results. The minus sign must appear directly before the word or phrase you want to exclude. Put a space before the minus symbol and not after. For example: "Arthur Obel –Pearl Omega."

Source: These guiding tips were extracted from Google: The Missing Manual, by Sarah Milstein et al. 2004. Sebastopol, CA: O'Reilly Media.

MODULE 10
Finding good story ideas about TB

- **Learn the value of building your radio program around a central idea or angle.**
- **Practice developing story ideas**

Listeners love a story well told. Good stories have a beginning, middle and end. They have purpose or an 'angle'. Listeners learn what happened? When? Who was involved? How and why did it happen? So it is important to be clear what the story is about. The more focused a story, the more specific the information listeners get.

For example, a story on TB-Diabetes would answer the following questions:
What? The link between TB and Diabetes
Where? The TB-Diabetes situation in a village or district.
Who? People who are affected by TB/Diabetes; people who treat either TB/Diabetes
Why? Lifestyles, availability of refined foods, poor knowledge on TB and diabetes
How? Research on how diabetes and TB are linked

Points to think about when choosing an angle for your story are:

- Is this angle is relevant and useful?
- What facts should I present to my listeners?
- How much information do they need?
- What really, is the purpose of my story? For example, you may wish to make it clear to listeners that if they have TB, they must check their blood sugar levels.

The basic facts about TB such as what TB is and how TB spreads or how TB can be tested and treated needs to be repeatedly conveyed to listeners.

These facts are not always new and so not newsy. But the basic facts about TB can be reinforced in the minds of listeners by presenting in a new light, through the lens of a new angle.

Good story telling can make people feel emotion. People make choices about their health not only from what they understand, but what they feel.

Exercise 1: Do follow up stories for radio from newspaper stories on TB

Read the TB related news report below and underline any information that you find interesting or useful. Write down the story ideas that you could explore further.

TB epidemic driven by lack of food in India TNN | Mar 24, 2015, 12.00AM IST
Undernutrition or lack of adequate food is the biggest cause of latent TB infection progressing to active tuberculosis in India, adding over a million cases of the 2.3 million new cases each year. If endemic HIV infection is what drives the TB epidemic in Africa, in India, endemic undernutrition in adolescents and adults is what drives it. This was revealed in a paper published on Friday in the

National Medical Journal of India by researchers from the Himalayan Institute of Medical Sciences in Uttarakhand and the McGill International TB Centre, McGill University, in Canada. According to the paper, more than half of all cases of TB every year — two¬-thirds of new cases in people 15¬19 years old — could be prevented by ensuring that people get enough to eat in terms of calories and proteins. India has the highest number of new cases of tuberculosis and of TB-related deaths in the world, with 2.3 million new cases and an estimated 320,000 deaths annually. "In India, an estimated 400 million people, a number larger than the entire population of the USA, are infected with the TB bacillus, but are asymptomatic though at risk of developing active TB. This infection can be contained if the immune system functions normally. Undernutrition, which suppresses the immune system, is the major factor driving the progression of infection in these people to active tuberculosis in India — rather than HIV (which accounts for only 7% of new cases), diabetes or smoking."

Research further, using Google, till you find new and additional information to support your angle. Write down who you think can contribute their experience to your story through a discussion or with material. For example, for a story about TB treatment, a person who is on DOTS or who has completed DOTS and declared cured, would be ideal. Look for at least two organizations who could help you find such a person. Include a discussion with an expert who is not cited in the print story.

Expand your story idea into a radio feature. Your feature must have a strong news angle. Your story plan must have a beginning, middle, and end. Present or 'pitch' the story to your colleague, get his or her feedback and fine-tune your story idea. Other forms of research such as visiting DOTS centers, reading in-depth articles and case studies and doing detailed interviews with medical experts and NGOs can also help you develop story ideas.

Exercise 2: Build your TB program with a purpose or 'angle'

Think about a specific purpose behind telling your listeners about TB. For example, your purpose could be to tell them that if they have a cough for more than two weeks they should get tested for TB. Write down this 'angle' in the center of the page. Write down all the questions that connect to this angle. What do people in the community usually do if they get a cough? Whom do they go to? What traditional/allopathic/home –made medicines do they take? Does it cross their mind that their cough could be because of TB? Look for information on the web about any surveys done to assess the awareness levels of TB symptoms among men and women. What knowledge gaps are there? Why? What do NGOs, the RNTCP or private doctors want to close the gaps? List out more questions that relate to this angle and plan your story.

Exercise 3: Walk around your village or town. Talk to local people to get story ideas. Talk to doctors, patients and NGOs working in TB control. Ask them what stories they think need to be told.

SUMMARY

- **Build your radio program around a central idea or angle.**
- **Read the daily newspaper to get story ideas for follow-up radio features.**
- **Interview experts, NGOs and people with TB to get story ideas.**

MODULE 11
Interviewing people about TB

- **Learn the value of preparation to conduct good interviews about TB.**
- **Practice various interviewing styles, including special approaches for interviewing people and children with TB disease.**

As a radio host, you are privileged to ask questions on behalf of your listeners who may not know even the basic facts about TB. You also have the chance to select suitable studio guests who can talk about TB clearly and correctly. Good questions and good answers combine to give listeners a high quality radio interview on TB.

Prepare ahead of the interview

Interviews can work well as stand-alone programs. Sound bites from interviews can form part of radio features. Interviews with community members, experts and patients can be rich sources of ideas for stories. Most story ideas come from information gathered from interviews, whether it be a casual chat in a chai shop, a phone call, or a recording.

Whatever the end product, interviews, like stories, must have a purpose.

Research your topic to select a focus area or an angle for your interview. Select a suitable interviewee. For example, a mother of a child with TB, or a paediatrician would be suitable for a story on childhood TB. List out questions for each interviewee as a guide, marking important questions which are essential for the interview.

Remember to address your questions to the person best suited to answer them. For example, a question about how many people have been cured of TB in your district is best answered by the State or District TB officer, rather than an NGO representative. A question about how long a person must be on TB medication is best answered by the doctor, not the patient.

Prepare your interviewees. You can plan the sequence of your questions. You can share the plan with your interviewees so that you all know how the discussion is going to unfold. During the interview, some questions may encourage answers that may inspire you to ask fresh questions, giving the interview a spontaneous, natural flow.

Use a suitable style of interviewing.

An interview is a useful format that allows people to express their opinions. They also provide information a listener needs to know. The interview format is a good way of involving decision makers such as your parliamentarian, the local Panchayat President, the head of the district hospital, a school principal and so on.

Interviews are also a good way to involve experts, such as a TB specialist, a social scientist, nutritionist and so on. Interviews with patients, their family members, co workers and friends can provide interesting stories.

The BBC says there are basically three kinds of interviews:

1. The hard exposure interview - investigates a subject. It tries to find out why and how something happened. It tries to find out who benefits from what happened. It may also explore what can be done to prevent such a thing from happening again.
Sample questions in a hard exposure interveiw:
Why does the RNTCP not provide nutritional support to TB patients?
Where is the evidence to show that giving nutritional support helps cure TB better?

2. The informational interview – provides both information and background.
Sample questions in an informational interview:
What percentage of people with TB is also underweight or malnourished?
What are the main nutrients a pregnant woman with TB needs?

3. The emotional interview - reveals an interviewee's state of mind. It tries to bring out what the interviewee feels and can make the listeners share those emotions.
Sample questions in an emotional interview:
What did you feel when the doctor told you that you were cured of TB?
What difference do you feel nutritional support made to your treatment?

Sometimes a question asked to get information may also bring out emotion and vice versa. The styles of questioning are not rigid. Planning the style of questioning when planning the story gives greater clarity to the questions and helps you obtain the sound bites and content you wish to get for the story as a whole.

Key points:

- Interview people who can speak with authority on the topic, as well as those who have interesting stories to tell.
- The Who, What, Where, and When questions can get answers that give the listener factual information.
- The Why and the How questions help listeners understand the topic in depth.
- Thorough preparation can help you remain in control of the interview.
- The better you know the subject, the more information you can draw out of the interviewee for your listeners.
- Doctors and scientists tend to express themselves with technical words that a lay listener may not understand. Ask them to explain the terms as they would to a school child.
- Instead of yes and no questions, ask open-ended questions to draw out the interviewees.
- A good interview is one that listeners can identify with and connect to their own lives. Good interviews encourage phone-in questions from listeners.

Exercise: Below is a scenario. Draw up a list of questions to adequately cover the story. A related research article is also provided. Explain how you will use it to enrich your story

Rani is a patient on DOTS from your village/town. She is waiting in line at the DOTS centre/hospital to see her doctor for her regular check-up and to receive her TB medication. She is tired and looks depressed. She has walked far to get to the hospital. Just before it comes to her turn, the hospital administrator walks into the room, announces that the hospital has run out of one of the TB drugs and apologizes. An NGO counsellor who counsels TB patients on DOTS and gives nutritional support

comments that the administration staff is inefficient, because they don't order enough medications to meet patient needs. The patient is clearly upset.

1. Whom would you interview for a radio feature based on the above scenario?
2. Choose three people to interview for the radio feature.
3. List one or two questions suitable for each of the types of interviews listed above.

Related research article:

Clinical response of newly diagnosed HIV seropositive & seronegative pulmonary tuberculosis patients with the RNTCP Short Course regimen in Pune, India

S. Tripathy, A. Anand, V. Inamdar, M.M. Manoj*, K.M. Khillare*, A.S. Datye*, R. Iyer**,
D.M. Kanoj*, M. Thakar, V. Kale, M. Pereira & A.R. Risbud
*National AIDS Research Institute (ICMR),*Talera Hospital & **Pimpri Chichwad Municipal Corporation, Pune, India*
Received January 27, 2010

Background & objectives: In the Revised National Tuberculosis Control Programme (RNTCP) in India prior to 2005, TB patients were offered standard DOTS regimens without knowledge of HIV status. Consequently such patients did not receive anti-retroviral therapy (ART) and the influence of concomitant HIV infection on the outcome of anti-tuberculosis treatment remained undetermined. This study was conducted to determine the results of treatment of HIV seropositive pulmonary tuberculosis patients with the RNTCP (DOTS) regimens under the programme in comparison with HIV negative patients prior to the availability of free ART in India.

Methods: Between September 2000 and July 2006, 283 newly diagnosed pulmonary TB patients were enrolled in the study at the TB Outpatient Department at the Talera Hospital in the Pimpri Chinchwad Municipal Corporation area at Pune (Maharashtra): they included 121 HIV seropositive and 162 HIV seronegative patients. They were treated for tuberculosis as per the RNTCP in India. This study was predominantly conducted in the period before the free ART become available in Pune.

Results: At the end of 6 months of anti-TB treatment, 62 per cent of the HIV seropositive and 92 per cent of the HIV negative smear negative patients completed treatment and were asymptomatic; among smear positive patients, 70 per cent of the HIV-seropositive and 81 per cent of HIV seronegative pulmonary TB patients were cured. Considering the results in the smear positive and smear negative cases together, treatment success rates were substantially lower in HIV positive patients than in HIV negative patients, (66% vs 85%). Further, 29 per cent of HIV seropositive and 1 per cent of the HIV seronegative patients expired during treatment. During the entire period of 30 months, including 6 months of treatment and 24 months of follow up, 61 (51%) of 121 HIV positive patients died; correspondingly there were 6 (4%) deaths among HIV negative patients.

Interpretation & conclusions: The HIV seropositive TB patients responded poorly to the RNTCP regimens as evidenced by lower success rates with chemotherapy and high mortality rates during treatment and follow up. There is a need to streamline the identification and management of HIV associated TB patients in the programme with provision of ART to achieve high cure rates for TB, reducing mortality rates and ensuring a better quality of life

TIP SHEET 3: Interviewing People Living with TB or HIV/TB

Tips to avoid pitfalls and make the most of your interview:

- Check and double-check whether the person is comfortable with revealing his or her identity.
- If you use a pseudonym, stick with the same one in follow-up interviews with the person.
- Never ask: "So how did you become TB or HIV-infected?"
- Never ask: "Does this make you feel depressed, suicidal?" Instead, ask: "How does this make you feel/how do you think attitudes about stigma have changed over time?"
- Do not ask questions that clearly make the interviewee uncomfortable.
- Talking openly about TB and HIV is becoming increasingly common. One can no longer interview someone simply because they are TB/HIV-positive – the story and interviewee need to reveal more than that.
- TB or TB/ HIV-positive interviewees, just like any other, should not be paid for interviews. This guarantees that the interview is done freely and ensures credibility.
- Recognize that some interviewees are very poor and have sacrificed their time to be available for an interview. You may want to buy them some food after the interview is over. This way, you avoid turning the interview into a "deal."
- Ensure that you have informed consent from the interviewee. It is not strictly necessary to fill out informed consent forms; sometimes this erects a barrier between interviewer and interviewee. Some people or organizations may insist on it. Your own judgment should also tell you when you think it is necessary. (Please refer to the Informed Consent Form)

Source: These tips are adapted from resources developed from UNAIDS and available at www.unaids.org.

TIP SHEET 4: Interviewing Children Affected by HIV/AIDS or TB

If your story is about children who are affected in one way or another by HIV/AIDS or TB, there is no doubt that the sound of a child's voice will enhance your story. But there are many pitfalls with interviewing children, particularly vulnerable children. The following guidelines will help you make the most of the interview:

- Do not violate a child's right to dignity or privacy. Children under 18 are too young to decide if their identity should be revealed. Discuss this with the child's adult caregiver. Even if consent is given, do not reveal his or her HIV or TB status, unless it is evidently in the child's best interest.
- Avoid perpetuating the stereotype of a vulnerable child as an "innocent victim" of HIV/AIDS or TB. Do not use such terms as "sufferer" or "child victim," and in your interaction with the child, don't appear overcome by sorrow. A child may read this as a confirmation that his or her circumstances are overwhelmingly sad.
- First launch into some general questions about issues that interest children.
- Children respond well to direct questions about their daily lives.
- Example: Instead of asking a child heading a household, "What does it feel like to have to be like an adult?" you could ask: "Tell me about the things you do every day for your brothers and sisters." The fact that a young voice is talking about doing adult chores will create the effect you are after.
- Children deserve to have their voices heard about matters that affect them, including HIV/AIDS and TB, but don't rely on a child's version only. They are often too young to understand the full context of their circumstances.

Source: These tips have been adapted from resources developed by UNICEF and available at www.unicef.org/media/media_tools_guidelines.html

Additional reading material

http://www.ifj.org/en/articles/childrens-rights-and-media-guidelines-and-principles-for-reporting-on-issuesinvolving-children

TIP SHEET 5: Interview Consent Form

Sample form, do adapt as per your station's requirements

I understand that I have voluntarily chosen to participate in this film/recording/story on my life and my experience of being affected by tuberculosis. I hereby consent to be interviewed, photographed, filmed, videotaped, have my voice recorded through various audio-visual means.

I hereby authorize <name of station> and its affiliates to release, disseminate, share, post on the Internet or distribute DVDs of these recordings. I understand that these clippings may be viewed in many countries around the world, as well as across India.

I understand that there are no commercial interests involved, and this information will not be "sold" to any third party.

I _____ (full name) hereby give <name of station> permission to use relevant information about me/my life/my experiences with TB in any press release, publication or other material. I understand that, as a result, this information may be made public.

Date:_____
Signature:_____
Address: _____
_____
_____

DECLARATION BY <station>

If you permit us to record and share information about you/your life, we promise to respect the sensitivity of your experience and the terms of this consent form.

Signature:_____
Date: _____

Note: If the interviewee is under 18 years, please get the signature of his/her parent or legal guardian.

MODULE 12
Writing for Radio

- **Points to consider when writing for radio.**
- **Practice the basic principles of writing for radio.**

Observe how people listen to the radio in their day-to-day lives. Listeners rarely sit down and listen to the radio to the exclusion of everything else. The tailor listens to the programs while stitching. Family members listen to the radio while doing the housework. The tea stall owner listens to the news while serving his customers. But when someone reads the newspaper they don't do anything else. Radio listeners absorb less information than someone who is reading a newspaper or watching television. Information given on radio is usually less than given in a newspaper. Choose the information carefully to convey the most important ideas in a simple way.

People need not be literate to absorb information from radio. Radio programs must be easy to understand by someone who is illiterate. The information given on radio must be simple and explanatory.

People can read a newspaper slowly at their own pace. But listeners depend on presenters. To help listeners follow the information, the sentences used on radio are short. They also cut out unnecessary information.

Listeners cannot rewind radio to listen to a piece of information they did not understand. They have only one chance to grasp it. Limit the number of facts. Give the facts in sequence. Keep them simple.

Radio conveys information to listeners through conversations. For example, the radio host talks to his listeners as though he is addressing each one personally; or he may conduct a discussion with guests in the studio. 'Talking words' are different from the formal words that are found in the newspapers. For example, we would say "doctor" rather than "physician", "high blood pressure" rather than "hypertension", "use" rather than "utilise" or "buy" rather than "purchase." Use the simple terms of 'everyday' language when writing for radio.

Practice these important principles when writing for radio. Practice each principle through the following exercises.

Principle 1: Use one idea per sentence

Example sentence:
The man, who works in a tea shop, has been coughing for two weeks.
The sentence above has two ideas:
Idea 1: The man works in a tea shop.
Idea 2: He has been coughing for two weeks.
The example sentence was written in newspaper style and not radio style. In radio style, it is better to use a separate sentence for each idea.

Exercise: Write these in radio style:

- The man from Chanderi does not know TB is curable.
- The woman who has been coughing for a month has now time to go to the doctor.
- Many of the DOTS Centres are crowded with people waiting to take their medicines.
- The doctor is sure his patient has TB because her sputum test was positive.
- 19 year old newly-wed Meena was diagnosed with TB soon after marriage and her husband abandoned her.

Principle 2: Always write in the active voice.

Sentences in the active voice are shorter and clearer than passive voice sentences.
What is active v/s passive voice?
Active: The boy kicked the ball.
Passive: The ball was kicked by the boy.
Active-voice sentences start with the subject, passive-voice sentences start with the object.

Exercise: write these in the active voice:

- The man was taken to hospital by the neighbour.
- The tablets were given by the DOTS provider.
- The tablets were swallowed by the patients.
- The food was prepared by the husband for his wife.

Principle 3: Use simple 'talking' words

Use simple talking words, words that you would use when you speak to a friend or a child.
Exercise: correct the following sentences by replacing unsuitable words with 'talking' words.

- Raj commenced DOTS last year.
- Meena arrived at her residence.
- DOTS is executed in a specific way.
- The NGO monitors patients in that village.

Principle 4: Eliminate unnecessary information

Just because you've got facts at your disposal doesn't mean they are essential or even relevant to your story. In radio, you have to eliminate as many facts as possible, because listeners can't absorb as many facts as readers. Remember that people can read a newspaper article again to refresh their memories, in radio, that's not possible.
Exercise: eliminate the unnecessary information in these sentences:

- The police discovered a 47-year-old man from Mattoli after he spent many days lost in the woods.
- The energetic doctor saw 25 patients that day.
- The 7 principles of excellent radio communication on TB were arrived at after deliberations by 22 participants from many community radio stations on the third day of a three day workshop on TB awareness through radio in Chennai.

Principle 5: Don't use too many numbers or names

If your audience can't go back to hear a story again, you should keep numbers in a story to a minimum. Simplify wherever possible.
Round off when you can: e.g Rs 950,000 becomes 'nearly a ten lakhs'.

Personalise numbers for your audience: e.g 20% of people becomes 'one in five people'.
Exercise: change these sentences to make the statistics suitable for radio:

- According to the WHO, 87 million people died of HIV-related illnesses between 2006 and 2008.
- The government says only 45% of women with TB seek treatment.

Principle 6: Link statistics or important facts to the appropriate authorities

You cannot say, 'In India, 3 billion USD is lost every year to the socioeconomic impact of TB' without linking the information to a source. You have to tell people where you got this information. Bear in mind that more than one such study has been done and that different institutions may use different figures.
Exercise: find three important facts about TB in India. Present them in a radio-friendly way.

Principle 7: Always make sure the script fits the sound you've recorded, not the other way around.

Select the sound bites that you would like to use and then write the links. Don't write a script and then try to throw sound bites in between, or your script will simply repeat the sound bites and lose much of its integrity and power.

Final Exercise:

Select any section of your choice from Part One of this handbook.
Check the selection against the principles of writing for radio.

MODULE 13
Using Natural Sound

- **Learn the value of using natural sound.**
- **Practice recording and using natural sound in your programs on TB.**

Imagine a radio story on migratory birds visiting a lake. The story would feature the cries of those birds, the sound of their wings, the sound of the waters lapping the shore, the sounds of tourists. The sounds all occur naturally at the location and are known as natural sound.

Good radio stories paint pictures of the locale, people and events using sound. Radio is all about the magic of sound.

Natural sound can convey the character and ambience of a location. A roadside dhabha might have the sound of truckers voices ordering tea or dinner, their conversations, trucks honking, the sound of vehicles zooming past on the highway, the hiss of eggs cooking on a tawa and the tinkle of spoon on glass as sugar is mixed into tea, with perhaps some film songs playing in the background.

Imagine a radio story about how truckers often miss DOTS because they have to be on the road for days or weeks at a time. You would include the voice of a trucker relating this experience. Setting the interview in the dhaba, weaving in all the natural sounds described above, overlaid with the voice of the trucker would enhance the overall effect of what the story is about. A listener would not only hear the trucker, they would feel immersed in his experience, almost as if they were in the dhaba, or on the highway with him. If none of these sounds were recorded, the impact of the radio story on the listener would be limited by and depend solely on the disjointed trucker's voice relating his experiences. Using natural sound creatively is one the best ways to make the most of telling stories on radio.

With effective use of natural sound, you can set the scene for your story; you can bring out the character of the people in the story; you can capture events and action as they take place; you can convey the emotion of the people in your story.

Sound is to radio what photos are to newspapers; sound brings your stories alive for your listeners.

When recording on location, there may be a variety of sounds. Keeping in mind the purpose of your radio story, you will need to choose which sounds would enhance your story.

For example, you plan a radio story on women who are at increased risk of developing TB because of exposure to wood smoke. You visit the home of a woman who cooks on a choolah. You listen carefully and hear the sound of the woman coughing, the sound of her blowing into a pipe to stike the choolah, the crackle of flames as the wood burns, the sound of pots and pans in her kitchen, the sound of children playing outside the hut, the sound of goats in her yard, the sound of the breeze in the trees and the sounds of birds in the trees.

The sounds of the woodfire, the coughing and the blowing directly relate to the purpose of the story, while the additional natural sounds fill in the rest of the picture. The more the natural sound relates to the story, the more effective the audio. When interviewing the subject, those natural sounds that illustrate the purpose of the story are more effective. The woman's voice over the sound of the woodfire would enhance the story much more than her voice against the backdrop of the wind in the trees.

Exercise: Planning the natural sound component for a radio story on TB

You need:

- A digital recorder
- A stereo microphone
- Headphones

Think about a story idea on TB for radio. Think of the main characters in your story. Where do the persons live? What do they do? Where would you interview each of these individuals? What are the places you would visit for your story? Visit the locations and record the natural sounds you hear at each location. Identify those that you feel enhance the effect of the interviews and the purpose of your story.

MODULE 14
Make a radio package on TB

Radio programs on TV can adopt a variety of formats.

The interview format is popular. It usually involves a doctor. Interviews on TB involving community members or NGO representatives are not as common.

It is critical to capture a range of voices about TB from the community. A variety of facts and opinions about TB from the community help listeners to 'own' the issue as being relevant to them.

Radio features are a useful format to include many voices from the community, as well that of experts.
A mix of good sound bites from interviews, natural sound and the voice of the reporter can help listeners grasp the important points about a specific topic on TB, for example TB and HIV.
A longer version of the same feature can make a detailed radio documentary on TB.
You may want to follow up your radio feature with a phone in program.

For a radio package on HIV and TB, studio guests could include a doctor who can explain why people with HIV are at higher risk for TB and how a person with TB and diabetes can take care of himself. A person living with HIV could share their experiences. An NGO representative or a counselor could talk about their work.

Many types of radio packages are possible, depending on the creativity of the radio presenter. The package could include a quiz on TB, songs, drama or poems.

The most important aspect of a quality radio package on TB is its purpose or 'angle'.
The more focused the package, the better the quality of information listeners get.
The more creative and focused the package, the more it can engage listeners.

Exercise:

Plan a series of radio packages on TB.
Plan each package with a central idea or angle.
What kind of research would you do?
Who are suitable interviewees for each package?
What are the key messages you would give in each episode?

TIP SHEET 6: SAMPLE TB TOPICS FOR RADIO PROGRAMS

If you're planning a series of programs on TB, it is very important to choose a clear topic for each program, or else they will all sound the same. Here are our suggestions on how you can choose TB topics for a 12 part series.

1. TB in India (TB in your state, district, city as well…)
2. How TB spreads
3. How can I find out if I have TB? (About diagnosis)
4. Treatment for TB
5. The link between TB and poverty
6. The social impact of TB
7. How stigma affects TB
8. India's programme for TB control (About RNTCP, DOTS)
9. Drug resistant TB (MDR-TB, XDR-TB, importance of completing treatment)
10. Double trouble: TB and HIV
11. Challenges in TB control
12. Community participation in TB control: role of volunteers

APPENDIX A
Checklist for high-quality radio programming on TB

ACCURATE INFORMATION

Does my programme:

- Help people understand the basics about TB control?
- Make people aware about TB services they can use to get information, diagnosis, treatment and follow up?
- Motivate them to seek these services?
- Convey information that is simple and easy to understand?
- Sustain focus on one single issue (eg: diagnosis of TB) in some depth?

HUMAN INTEREST

Does my programme:

- Have powerful quotes?
- Have a human face – does it feature the descriptions and perspectives of people with TB and service providers?
- Use the right interviewees for the right subjects?

ETHICS

Does my programme:

- Respect the confidentiality of patients?
- Use language that is inclusive and non-discriminatory?
- Demonstrate balance and objectivity?
- Provide context?

FINALLY

- Is my program innovative and creative?
- Does it sustain interest from start to finish?
- Does it send clear messages?

APPENDIX B
Resource people for Story Ideas and as Studio guests

GOVERNMENTAL SOURCES

For national level data, polices, budget allocations and programs contact the Ministry of Health and Family Welfare: Central TB Division/RNTCP

For state level data, budgetary information and program details and targets contact the State TB Cell/State TB Officer

For district level data, budgetary information, program details, World TB Day plans, contact your:

- District TB Officer
- Staff at District Microscopy Centre (one lakh population)
- Senior Treatment Supervisor
- Senior TB Laboratory Supervisor

All names and contact information on government sources can be accessed here:

http://www.tbcindia.nic.in/Dir.html

NON-GOVERNMENTAL SOURCES

Please contact the Partnership for TB Care and Control for a complete list of almost 200 NGOs working on TB in India. From this list, you can choose those located in your areas.

Use this page to list sources for your programs on TB.

CONTACT US

Websites
http://www.axshya-theunion.org
http://www.reachtbnetwork.org
Email
reach4tb@gmail.com
TB Helpline
1800-102-2248