A communication tool for health workers and peer educators

TB, Silicosis and HIV among mineworkers, ex-mineworkers, their families and communities

TB in the Mining Sector: Southern Africa Programme In support of the SADC Declaration on TB in the Mining Sector







How and when to use this flipchart

This flipchart is a tool to facilitate interaction between health workers/peer educators and mineworkers/mining communities about the serious matter of TB.

It has been produced as part of the TB in the Mining Sector Southern Africa Programme which aims to reduce the burden of TB in Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe.

The flipchart provides quite detailed information about TB and the related disease of silicosis and how these lung diseases affect mineworkers. ex-mineworkers, their families and their communities.

It also explains how TB and HIV are linked, but does not deal with HIV in detail because good materials about HIV already exist in all countries.

Information about TB

You will guickly realise that the flipchart contains more detail about TB than most materials designed for the general public. The objective is to deepen the knowledge of members of mining communities about this danger to their health.

Information about silicosis

The flipchart also provides key information about silicosis, because awareness is extremely low. Many mineworkers are at serious risk of this incurable disease, but they know little or nothing about it. They and future generations of mineworkers have a basic right to information that may enable them to avoid silicosis.

While TB and HIV are a concern for all mineworkers and mining communities in all the above countries, silicosis does not occur in all types of mining. Therefore, the pages on silicosis should only be used where it is probable that mineworkers actually face this threat.

When is silicosis a risk?

Mining carries a risk of silicosis when the rock to be blasted, drilled or broken produces silica dust. This occurs in many kinds of rock, but not all. Dangerous amounts of silica dust are:

- Common in gold mining
- Quite common in platinum mining
- Occasionally found in coal mining
- > Present in some gemstone mining (for example, in tanzanite mining)

Why provide a flip chart?

The advantage of a flip chart, compared to a pamphlet or poster, is that it gets people talking. This is valuable because:

- > Many people still see TB as a disease they need to hide from neighbours and workmates. By talking about it, we challenge secrecy, help reduce stigma and encourage people to come forward for treatment
- > People who attend a talk get a chance to ask questions and clarify points they do not understand
- > If the talk is lively and the presenter is interesting, people remember the information better than if they simply read a poster or leaflet
- > Limited literacy is not a barrier to becoming informed

Tips on how to use the flip chart effectively

- > A few pages in each session, as people can only absorb a limited amount of new information at one time
- > So, decide on a theme for your information session and choose about four pages that fit the theme
- > We have suggested how you can group the slides by theme in the table on next page (but this is only a guide - you can mix them however you prefer)
- > Present the selected pages slowly, repeat some points when necessary, and pause often to encourage questions from your audience

Notes in front of presenter

and longer notes for the presenter)

As the presenter:

- > You need to keep the notes where you can see them
- > Rehearse your talk so you know what is in the notes, and how to link the notes to the pictures
- > Treat the notes as a guide. You do not have to learn them by heart and should feel free to expand on them if necessary

Pictures facing audience

Pictures are important because:

- > They help explain things to the audience
- > They also help the audience to remember what you say

enough to see the pictures

Point-and-talk technique

talking about a subject

stand behind it



Every topic has a page that faces your audience (with big pictures and short text) and a page that faces the presenter (small pictures

- This tool is meant to inform and educate individuals or small groups of people. You should ensure everyone is sitting or standing close
- It is important that you point to the relevant picture as you are
- In order to do this, you can sit to the side of the chart or you can



How to use this flipchart

Adding detail and local phrases

You can change some of the words in the notes in order to make things clear for your audience

For example, you can use simpler words, locally used terms, or translate important words

Just be sure that you keep the meaning the same

When and where to use this flip chart

- > During community or workplace health days
- During door-to-door awareness campaigns
- > In waiting rooms of clinics and hospitals
- With newly diagnosed TB patients
- With close contacts of newly diagnosed TB patients

Who to use it with

This flip chart is meant to be used to communicate with:

- > Current mineworkers, either at their place of work or in their communities (that is, settlements at the mine or their towns of origin, in the case of migrant workers)
- Ex-mineworkers
- Families of current mineworkers and ex-mineworkers
- > Communities where mineworkers or their "home" communities live, in the case of migrant workers

Some topics may be suitable for all the above audiences, while other topics may be of interested to specific groups (see table)

How to combine pages to form a theme for a talk

Theme	Flipchart pages	Audien
What everyone should know about TB	Page 1: What is TB? Page 2: How can I tell if I have TB? Page 3: How does TB spread? Page 6: How is TB treated?	
TB and its effect on mineworkers and mining communities	Page 1: What is TB? Page 3: How does TB spread? Page 5: Why do so many mineworkers get TB? Page 8: How does preventing and treating HIV help with TB? If relevant add Page 9: What is silicosis?)	
Preventing and treating TB	Page 1: What is TB? Page 3: How does TB spread? Page 4: How can we stop TB from spreading? Page 6: How is TB treated?	
How you can recover from TB and help protect those close to you	Page 1: What is TB? Page 6: How is TB treated? Page 7: How will I feel during TB treatment? Page 4: How can we stop TB from spreading?	Individu minewo or part
How you can help a family member, work colleague or neighbour recover from TB while protecting your health	Page 1: What is TB? Page 3: How does TB spread? Page 4: How can we stop TB spreading? Page 6: How is TB treated?	
Silicosis: your right to know about the invisible threat to mineworkers' health	Page 9: What is silicosis? Page 10: How can I find out if I have silicosis? Page 11: What is the difference between TB and silicosis? Page 12: How can silicosis be prevented?	
Living with silicosis	Page 9: What is silicosis? Page 10: How can I find out if I have silicosis? Page 13: What help is there for people with silicosis? Page 11: What is the difference between TB and silicosis? Page 14: Can I get compensation for silicosis and TB?	Minewo silicosis silicosis families

For assistance on using this flipchart tool, contact the National TB Programme or visit www.timssa.co.za



ces

orkers and ex-mineworkers; mining unities (both near mines and the source unities of migrant workers)

orkers and ex-mineworkers; mining unities (both near mines and the source unities of migrant workers)

orkers and ex-mineworkers; mining unities (both near mines and the source unities of migrant workers)

uals newly diagnosed with TB, whether orker, ex-mineworker, family member of broader community

contacts of individuals newly sed with TB. It would be a good idea ude the primary patients in this talk so et a rerun of the information

orkers and ex-mineworkers in types ng where silicosis generally occurs; unities near mines (both the source unities of migrant workers)

orkers and ex-mineworkers who have is or have worked in mines where is is known to have occurred, their and community members





What is TB?

TB is a serious disease that affects the lungs



TB is caused by germs called bacteria



Children, elderly and people with other illnesses are at higher risk



TB treatment is highly successful if taken correctly



If not treated, TB will spread and often causes death





2.

3



- TB can be treated very successfully
- if treatment is taken correctly



• It is possible to cure nearly all cases of TB,

• We must not ignore TB – we must take action

• We can make our workplaces, schools, homes and communities healthier by helping every



Check for the signs of TB





If you answered **YES** to one or more of the above:

Get checked at your clinic or hospital

A sputum test will detect if you have TB





Unexplained weight-loss

 -
-
-



IMPORTA

- You could have TB if you are experiencing any of the following symptoms:
 - · A cough that lasts two weeks or longer
 - Sweating heavily at night
 - Fever

down

• Unexplained loss of weight

2 If you have one or more of these, go to a clinic or hospital, explain you suspect you could have TB and ask the nurse or doctor to check

- Do not delay this check-up. It is easier to treat TB at an early stage of illness
- The health worker may ask you to cough up **sputum** so this can be tested for TB germs (or bacteria)
- Clinics use different types of tests to check if there are **TB germs in your sputum**. Some give quick results while others take a few days
- It is very important that you arrange with the clinic or hospital to get the results of your test. Make sure you have given the correct home address and phone number so the clinic can contact you

Additional TB symptoms prioritised in various TIMS countries:

		Botswana	Swollen glands in your neck or ar
5	*	Lesotho	No additional symptoms
		Malawi	No additional symptoms
	*	Mozambique	Coughing up blood, chest pain or
	*	Namibia	Swollen glands in your neck or ar
		South Africa	No additional symptoms
		Swaziland	No additional symptoms
		Tanzania	No additional symptoms
	Ť	Zambia	No additional symptoms
		Zimbabwe	No additional symptoms





rmpits

shortness of breath rmpits



How does TB spread?

TB is spread when:

Someone with TB coughs or sneezes TB germs into the air from their lungs A healthy person nearby breathes in the TB germs from the air





TB is **NOT** spread by:



Shaking hands



Sharing food or drink



Contact with dirty water or sewage



Once they enter the lungs the germs slowly grow and the person gets sick

How does TB spread?

TB is known as an "air-borne" disease. This means the germs are carried by the air and enter our bodies when we breathe them in

This happens when someone with TB sneezes, coughs, laughs or speaks and germs are sent into the air

Another person is close enough to breathe in the germs, which enter the lungs

Once in the person's lungs, the germs multiply, causing the disease

In most cases TB stays in the lungs but it can spread from the lungs to other parts of the body 2.

It is NOT possible to get TB by:

- Shaking hands with someone who has TB
- Sharing food or drink with the person
- Contact with dirty water or sewage
- Touching the clothes or bed linen of someone with TB



swallow them



TB is most likely to spread between people who spend a lot of time close to each other: family members, school mates, work colleagues, people who live in the same house or hostel





This is because we breathe in TB germs, we do not



How can we stop TB from spreading?

Treat all people who have TB, so they cannot infect others



Check if people living with TB patients are also infected









Let fresh air into home and workplace of person with TB your body fight TB



Check if you should take medicine to prevent TB



If you have HIV, take ARVs to help



How can we stop TB from spreading?



It is important to know that we can limit the spread of TB if we trust each other and work together. It is very hard to fight TB alone

- First, we must help every person with TB disease to get treatment. About three weeks after starting treatment, the sick person can no longer infect anyone else
- We must also make sure that people living or working closely with someone who has TB are checked for TB and treated, if necessary



TB can be prevented by taking a small amount of medicine every day for a few months. This is only for people who are at high risk of getting TB, such as:

- Adults and children living with HIV
 - house with someone who has TB



3.

- People who have TB should always cover the nose and mouth with handkerchief or tissue when they cough or sneeze. The tissue must immediately be thrown into a rubbish bin
- Families where someone who has TB should keep windows and doors open. By letting in fresh air, we push out the stale air that may contain TB germs
- Fresh air and dust control in the workplace also help to stop TB from spreading
- People living with HIV should get ARV treatment as early as possible. ARVs help the body to fight against all sorts of diseases, including TB





• Children under five years who are sharing a

If a tissue is not available, cough or sneeze into the sleeve of a shirt/jersey/jacket

- If a tissue is not available, cough or sneeze into the sleeve of a shirt/jersey/jacket

Do not spit out sputum

Wear a surgical mask when

Turn your head away from persons close by when coughing

Keep a distance of three feet

between yourself and others

Disinfect hand if you have

coughed or sneezed into it

Why do so many mineworkers get TB?



TB strikes when the body is weakened by other diseases Many mineworkers get silicosis. This weakens defences against TB



Crowded living conditions and stale underground air help TB to spread











HIV among mineworkers reduces their ability to fight off TB infection

Mineworkers with untreated TB can infect families and co-workers







- HIV is also common among mineworkers. HIV weakens the body so that it cannot fight off TB and other diseases
- In addition, the living and working conditions of mineworkers contribute to the spread of TB. Mineworkers often live together in crowded rooms. They work close to each other underground. TB can easily pass from one sick mineworker to a few others
- mineworkers

4.





 When mineworkers who have TB are living at home or when they visit home, they can pass TB to family members, unless they are on TB treatment. This is why TB is common in communities close to mines and in the hometowns of migrating

How is TB treated?



Medicines for at least six months





No alcohol as it can damage the liver



Do not stop taking medicines until instructed to do so – TB can return



Eating healthy foods strengthens the body to fight the infection

assists successful treatment



No smoking as it delays recovery



Support from family and friends

How is TB treated?

down



- TB is treated by taking medicine, without a break, for at least six months
- TB treatment takes a long time because TB germs die very slowly



Need to eat healthy

foods

- 6.
- complete the course as required

- 2. IMPORTANT
- People on TB treatment must take their medicines until the doctor or nurse says they are cured. If they do not, the **TB** will come back and could be worse than the first time



• People who are on **TB** treatment must not drink alcohol. This is dangerous, because alcohol plus **TB** medicine can damage the liver



• People who are on **TB treatment should** not smoke, because smoking slows down recovery from TB





- other people in the hostel their medicine
 - the same time





• Support from a family member or a close friend makes it easier for someone taking treatment to

 Usually people with TB live at home during treatment. But mineworkers living in hostels are sometimes admitted to hospital just for a few weeks, until they are no longer able to infect

• As soon as they are strong enough, they can go back to work but they must continue to take

TB treatment involves taking different medicines at

• These medicines are very powerful and they can have side-effects (by side-effects we mean the medicine itself can make you feel a little sick)

 To make it easier to take the medicines, different medicines are often combined into one pill



You will soon feel much better but DO NOT stop taking medicines!



Normal side-effects of TB treatment:



Hunger

Mild nausea



Orange urine, saliva and tears

go and see a health worker: **Trouble breathing** Skin rash

Severe nausea

or vomiting



If you experience ANY of the following,



Swelling of face or mouth



Yellow colour to skin or eyes



Difficulty seeing or hearing

2.





- Some feel so good that they make the mistake of thinking they are cured
- Don't make that mistake: keep on with your treatment for at least six months - don't stop until the doctor or nurse says you are cured
- You may feel very hungry as you get better and your appetite returns
- The medicine may also have some side-effects that make you feel unwell
- · Sometimes side-effects are slight and go away after some time, in other cases, they are serious
- If your TB treatment makes you feel sick, don't give up. Rather see your doctor or nurse for help
- Don't be surprised if your **urine**, stools, tears, and saliva turn orange or red in colour. One of the medicines causes this. Things will return to normal when your treatment is finished
- Other common side effects include: hunger, mild nausea





IMPORTANT

any of the following side-effects:

- Trouble breathing
- Swelling of your face, A fever that lasts lips, tongue or throat three days or more when you don't have • A skin rash a cold or flu
- Severe nausea or vomiting
- Jaundice (yellow Blurred vision colour in your skin or the white part of your • Difficulty hearing eyes)



Immediately see a doctor or nurse if you have

• Soreness in the belly

- A general feeling of being sick



How does preventing & treating HIV help with TB?

HIV destroys the body's ability to fight other diseases like TB



Protection against HIV is also protection against TB



Get yourself tested so that you can know your status

If HIV negative:



If HIV positive:





Continue to prevent HIV infection

Take ARVs to rebuild body's defences



How does preventing & treating HIV help with TB?



- HIV destroys the body's ability to fight many other diseases, including TB
- TB is found more often among people who have **HIV** than among the general community
- Protection against HIV is also protection against TB



If you are HIV-negative:

- Try by all means to stay negative
- under these conditions
- **HIV.** Both traditional and medical circumcision removed



If you are HIV-positive:

- (including TB)
- less likely to infect someone else



• Mineworkers and their wives often live apart for long periods - It may be hard to remain faithful

• Always use condoms. It is very wise to use condoms – not just sometimes, but all the time

• For men, circumcision reduces the risk of getting

help prevent HIV as long as the entire foreskin is

• By lowering the amount of HIV in your body, **ARVs rebuild your ability to fight diseases**

• With a lower amount of HIV in your body, you are

• You should start ARVs as soon as possible

What is silicosis?





It is caused by silica dust found in many kinds of mines

Silicosis is a very serious lung disease that affects mineworkers and ex-mineworkers

Silicosis makes breathing and moving extremely difficult

Silica dust cau in the lungs





Silica dust causes scars and lumps

What is silicosis?



- It is caused by breathing in silica dust, a dust so fine we cannot see it with the naked eye
- This dust is produced during mining when rock is blasted, drilled or crushed



- and scars form in the lungs
- The lung damage makes it difficult for the person to breathe
- getting TB
- their lungs

- Silica dust is found in many types of mines but not in all mines
 - It is common in gold mines. It also occurs in some platinum mines, some coal mines, and some gemstone mines
 - In such mines, all mineworkers are at possible risk of silicosis – those working underground and on the surface



There is no cure for silicosis and the damage to the lungs cannot be removed. However, healthcare professionals can help their patients live more comfortably



• When silica dust gets into the lungs, the lungs get inflamed (red and swollen) and hard lumps

• This lung damage also increases the risk of

• The longer mineworkers are in contact with silica dust, the more serious the damage to



How can I find out if I have silicosis?



There are no outward signs of silicosis for many years



At a late stage, signs of silicosis are coughing and shortness of breath







An X-ray can show damage to the lungs – before other signs appear

> Lung damage can be limited by moving to a silica-free work area



How can I find out if I have silicosis?

- In most cases, silicosis develops very slowly and you may not see any outward signs of the disease for many years
- Mineworkers are often unaware they are developing silicosis because they do not feel sick. They are likely to go on working as normal even through their lungs are being destroyed
- It is common for mineworkers to find out they have silicosis many years after the damage begins, even years after they have stopped working in the mines

- At this late stage of the disease, the outer signs become clear
 - > The affected worker may start to cough
 - > He will be short of breath
 - > He may find it hard to breathe in some cases, eventually getting so short of breath, he becomes unable to walk around or perform normal tasks



- chest X-rays
- limited







• An X-ray can show lung damage caused by silica dust long before there are outward signs

• It is important for workers on mines with silica dust to get regular medical checks that include

• It is also important for workers at these mines to ask the doctor the result of the health check

• If lung damage caused by silica dust is discovered early AND if the affected worker stops working in dusty conditions, then the lung damage can be



What is the difference between TB and silicosis?

Many mineworkers have TB AND silicosis

Both affect lungs, but they are very different in several ways





TB Is caused by germs called bacteria



It can spread from person to person

It can be cured by taking medicine











Silicosis Is caused by silica dust



It cannot be passed from person to person

It cannot be cured, and gets worse over time









How can silicosis be prevented?



Protection from blasting dust

Use of dust masks





How can silicosis be prevented?





- Silicosis can be prevented by reducing mineworkers' contact with silica dust
- Prevention is very important because silicosis cannot be cured and it is a very serious disease
- In most countries, there are laws about dust control in the mines and regular health checks for mineworkers
- Mining companies have a duty to obey these laws
- Trade unions and mineworker associations can play an important role in ensuring workers are protected

2. Important ways to reduce workers' contact with silica dust are:

- Proper ventilation of mines. By ventilation we mean sucking dusty air out of the mine and pumping in fresh air. This reduces the amount of silica dust in the air
- Use of water during mining operations, so that the dust is trapped in the water and does not fly into the air
- Cleaning up dust in a safe way for example, by vacuuming or with water - so it does not spread into the air
- Removing workers from the point of blasting and preventing the dust caused by blasting from reaching them
- Providing workers with masks that cover the nose and mouth, but still allow them to breathe easily



• Providing places where workers can wash to get rid of dust and store their work clothes separately from their other clothes



What help is there for people with silicosis?

There is no cure for silicosis. The lung damage is permanent



Lung damage can be limited if it is found early

People living with silicosis







Immunisation to prevent flu and chest infections



Keep as active as possible



Drink more water



Check for TB and treat early



Healthcare for silicosis patients



Early treatment of chest infections



Inhaler (pump) to assist breathing





- There is no cure for silicosis
- The damage to the lungs cannot be reversed and mineworkers with silicosis must live with it for the rest of their lives
- Many mineworkers find that their condition gets worse after they have left the mine
- If silicosis is discovered early, the damage can be limited but only if the worker avoids further contact with silica dust
- In some cases, the company may move the worker to a safer job
- In other cases, the worker may decide to put health first and leave mining
- Influenza (flu) and other throat and chest infections are a serious problem for people with silicosis

Health professionals can: 2.

- Immunise patients to prevent them getting the flu and some other chest infections
- Provide early treatment for chest infections to prevent them getting worse
- Check for TB and provide treatment if this is necessary
- It may also be possible for the health service to help the person breathe more easily by providing a small "pump" like the one used by people with asthma. This helps to open the airways in the lungs



Living with silicosis

There are things workers and ex-workers with silicosis can do to live more comfortably:

- Stop smoking, if they have been smokers
- Drink more water and other liquids
- Use steam to ease breathing
- Keep as active as possible even if you move slower than normal







Some mineworkers or ex-mineworkers may get compensation if they:

A medical examination



The family may claim in the event of a worker's death



Became ill due to working on the mine



A compensation claim requires:

Proof of worker's employment on



 Mineworkers and ex-mineworkers have the right to be compensated if they are too sick to work as a result of getting silicosis from mining or getting TB as a result of having silicosis

down

 In South African mines, it is also possible for workers to get compensation if they are unable to work while being treated for TB, even if they do not have silicosis.
Migrant workers from other countries who

work in South Africa are covered by South African law

- To get compensation, you must prove that you worked on the mines, that you got silicosis or silicosis and TB as a result of this work, and you are too sick to continue working
- One of the most important steps is to get a medical report.
 To do so, you need to be examined by a doctor at an approved clinic or

hospital. This is known as a **Benefit Medical Examination**

- Special Occupational Health Service Centres (OHSCs) have been set up for mineworkers and ex-mineworkers in some areas. They do medical examinations, provide treatment and help with your compensation application
- It is not possible to get compensation if you worked on an illegal or unregistered mine



- If a mineworker or ex-mineworker dies as a result of getting silicosis or TB/silicosis while working on the mine, then his family is entitled to compensation
- Mineworkers should ensure a family member has details about where to get work records, in case the family has to make the application



SEE LIST BELOW of TIMS Occupational Health Service Centres:

	Botswana	Molepolele
*	Lesotho	Mafeteng and Maseru
	Malawi	
*	Mozambique	Xai - Xai and Manjakaze
*	Namibia	Swakopmond
	South Africa	Mthatha and Carletonville
	Swaziland	Hlatikulu and Manzini
	Tanzania	Siha District and Kilimanjar
Ĭ	Zambia	Kitwe
	Zimbabwe	Kadoma

?



o Region