

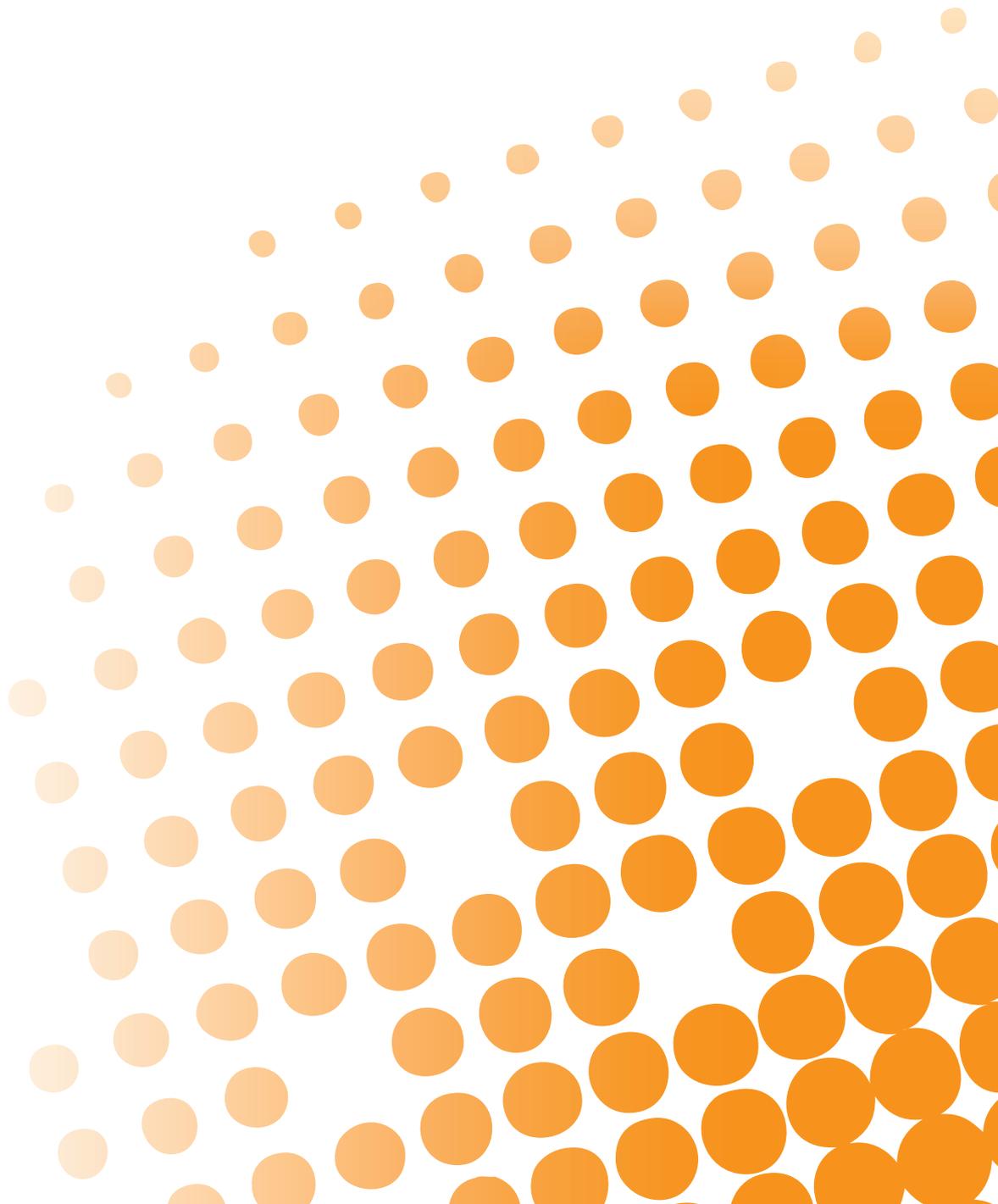


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tubidu

Guidance

for community based organizations
on **tuberculosis** services
for people who inject drugs



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TUBIDU 2011–2014

Empowering the Public Health System and Civil Society to Fight the Tuberculosis Epidemic among Vulnerable Groups

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Abbreviations and acronyms

AIDS	Acquired immunodeficiency syndrome
ART	Antiretroviral therapy
CBO	Community based organization <i>(defined as non-governmental and other type of civil society organizations that are usually self-organized in specific local areas to increase solidarity and mutual support to address specific issues)</i>
DOT	Directly Observed Treatment <i>(a component of TB case management that helps to ensure that patients adhere to treatment; narrower meaning: a trained health care worker or other designated individual watches the patient swallow every dose of the prescribed TB drugs)</i>
EU	European Union
HIV	Human immunodeficiency virus
IEC	Information, education and counselling
INH	Isoniazid
LTBI	Latent tuberculosis infection
MDR-TB	Multidrug-resistant tuberculosis <i>(defined as TB caused by strains of M. tuberculosis that are resistant to at least isoniazid and rifampicin)</i>
NTP	National Tuberculosis Programme
OST	Opioid substitution treatment
PLHIV	People living with HIV
PWID	People who inject drugs <i>(sometimes also referred to as injecting drug users - IDU)</i>
RIF	Rifampicin
TB	Tuberculosis
WHO	World Health Organization

Introduction

People who inject drugs (PWID) are often among the most vulnerable and socially excluded people in any society and are therefore exposed to many risk factors which put them at high risk of contracting tuberculosis (TB).^{1,2} When compared with the general population, people who use illicit drugs have a higher risk of developing active TB disease, once infected.^{3,4} Although the higher risk of TB observed in PWID is usually the result of associated HIV infection, PWID are also more commonly predisposed to imprisonment, living in cramped conditions or in dwellings with poor ventilation, homelessness, poor nutrition and associated with alcoholism.³ All those factors complicate TB diagnosis and treatment among PWID, as they tend to have complex needs and less access to life-saving interventions. Thus, a more coordinated response to drug users' needs is required, in order to provide universal access to prevention, treatment and care services at all entry points.

The community-based organizations (CBOs) working with PWID have many existing strengths that can be built on to help in the fight against TB, such as understanding the local context and the needs of their members. The literature provides abundant evidence about the benefits of greater involvement of communities and CBOs in various functions traditionally held by the health system.⁵ The World Health Organization (WHO) also recommends a more active promotion of the participation of people with TB and the community in aspects of TB control. Active participation of communities and civil society in TB response allows people with TB to be identified and diagnosed more quickly, and to receive better quality care within their communities. This is especially true in the case of the poor or other vulnerable groups who do not normally have access to TB services and are hard to reach.⁶ Treatment outcomes are also improved, and people with TB become empowered by the opportunity to make decisions about the type of care that best suits them and their community. Evidence also shows that community based TB care is cost-effective compared with hospital-based care and other conventional ambulatory care models.⁵

The guidance is intended for CBOs dealing with PWID and the main key interventions on TB control should be as follows:

1. Intensified TB case finding, including active case finding, contact tracing and active referral to health care services
2. Infection control
3. Isoniazid (INH) preventive therapy
4. Supporting clients on TB treatment and finding clients lost to follow-up
5. Delivering TB treatment (e.g. implementation of DOT)
6. Informing, educating and counselling people who use drugs, those close to them and the wider community

Process of developing the guidance

This guidance has been developed in the framework of the project TUBIDU: Empowering Public Health System and Civil Society to Fight Tuberculosis Epidemic among Vulnerable Groups. This European Union (EU) project is funded by the “Programme of Community Action in the Field of Health (2008-2013)” and includes seven participating organizations from six EU countries (The Dose of Love Association in Bulgaria, The Estonian Network of People Living with HIV and The National Institute for Health Development in Estonia, The Finnish Lung Health Association in Finland, The Tuberculosis Foundation of Latvia, The Institute of Hygiene in Lithuania, and The Romanian Angel Appeal in Romania). Five collaborating partners are also included in this project, all of them from non-EU countries (Leningrad Region AIDS Center in the Russian Federation, The International HIV/AIDS Alliance in Ukraine, The National Center for Tuberculosis and Lung Diseases in Georgia, World Vision Albania and World Vision Bosnia-Herzegovina). The general objective of the TUBIDU project is to contribute to the prevention of injecting drug use and HIV-related TB epidemic in the project area. The strategic objectives include empowerment of the public health system and civil society and enhancing the collaboration of various stakeholders in the field in order to tackle TB.

The situation in all TUBIDU partner countries was taken into consideration, when developing the guidance; this includes legislative issues and health and social care organization. In addition, focus groups involving drug users and CBO personnel were carried out and a cross-sectional study among current PWID was conducted. International scientific literature and guidance was also reviewed.^a

The guidance is based on the recommendations of the existing key WHO¹ European Centre for Disease Prevention and Control and European Monitoring Centre for Drugs and Drug Addiction⁷ guidelines for TB and HIV prevention, care and treatment. The guidance recommendations which refer to the evidence-based and internationally recognized approaches to TB diagnostics, treatment and prevention, have been placed in the context of PWID, taking into account the background and conditions in all partner countries.

Rationale

The aim of the guidance is to provide information and recommendations on how CBOs could be more involved in TB prevention, control and treatment services. The recommendations in the guidance should be implemented or adapted according to the local legislation and conditions.

In this guidance, targeted CBOs are defined as non-governmental and other types of civil society organizations that work for the prevention of HIV and other infectious diseases, as well as those providing harm reduction, health and welfare services for PWID and those close to them. The guidance is not directed to organizations providing primary or specialized health care services, as the profile of these organizations usually requires more strict and specific measures for TB prevention and control. Nevertheless, this material could be helpful to those organizations in their collaboration with CBOs.

^a All documents are available at: <http://www.tai.ee/en/tubidu/publications>

1. Basic information about TB

1.1 Tuberculosis

TB is an **airborne infectious disease** caused by a bacterium called *Mycobacterium tuberculosis*.

One third of the world's population are infected with TB. In 2012, TB disease affected an estimated 8.6 million people, including 1.1 million new TB cases among people living with HIV (PLHIV). Globally, TB caused 1.4 million deaths, of which 320,000 people were HIV-positive. Worldwide, 3.6% of new cases and 20% of previously treated cases were estimated to have multidrug-resistant (MDR) TB. The highest proportions of MDR-TB patients are in Eastern Europe and Central Asia.

1.2 Transmission of TB

TB bacteria are released into the air when **a person with TB disease of the lungs or throat coughs, sneezes, speaks, or sings**. People who breathe air that contains these bacteria may become infected. However, TB is not easily transmitted - only one third of those exposed to the disease over a long period of time (usually many hours or days) become infected.⁸

The risk of transmitting TB infection is at its highest during the period prior to diagnosis. **The risk is significantly reduced within two weeks of commencing appropriate therapy.**⁹

TB bacteria are not spread by sharing material objects (e.g. clothes, toilet seats, books), food, drink, or by shaking hands with someone who has TB.

TB most commonly affects the lungs but can attack almost any organ of the body.

1.3 Latent TB infection and TB disease

When *Mycobacterium tuberculosis* enters a person's lungs, they could become infected. The probability of contracting TB infection differs from person to person and depends on the individual's level of immunity. Not everyone infected with TB bacteria develops TB disease.

People who become infected but are not sick have what is called latent TB infection (LTBI). **People who have LTBI do not feel unwell, do not have any symptoms, and cannot spread TB bacteria to others.**

About one in ten cases of LTBI eventually develops full-blown TB disease.⁸ **People who have TB disease feel unwell, have signs and symptoms of TB, and, if they have pulmonary or throat TB, may spread TB bacteria to others.**

1.4 TB risk groups and risk factors

Persons with **increased risk of developing TB disease** after being infected with TB bacteria are:¹⁰

1. Persons who have a risk factor that increases the risk of progression from LTBI to TB disease

- Babies and young children (<5 years)
- Those infected with HIV (especially if untreated)
- Substance abusers
- People with any of these conditions:
 - silicosis
 - diabetes mellitus
 - severe kidney disease
 - those who have undergone an organ transplant
 - head and neck cancers

- Those with low body weight
- Those receiving certain medical treatments such as high dose corticosteroids, cytostatic medications and some specialized biological medications developed for the treatment of illnesses such as rheumatoid arthritis or Crohn's disease

2. Persons who belong to population segments with a high risk of infection with TB bacteria (i.e. high-risk group)

- Close contacts of a person with infectious TB disease
- Persons who have migrated from areas with high rates of TB
- Groups with high rates of TB transmission, such as homeless persons, PWID, and those infected with HIV
- Those working or living with people who are at high risk of TB in facilities or institutions such as hospitals, homeless shelters, correctional facilities, nursing homes, and residential homes for PLHIV

1.5 Symptoms of TB Disease

Symptoms of TB disease depend on where in the body the TB bacteria are growing.

TB disease symptoms may include:

Pulmonary symptoms	Constitutional symptoms
<ul style="list-style-type: none"> ● prolonged cough that lasts more than 3 weeks ● chest pain ● shortness of breath ● coughing up blood or bloody sputum 	<ul style="list-style-type: none"> ● fever ● night sweats ● weight loss ● loss of appetite ● fatigue

1.6 Diagnosis of TB disease

People suspected of having TB disease should be immediately referred for a medical evaluation.

Medical evaluation for TB includes:

- Taking a medical history
- Physical examination
- Chest radiograph (X-ray)
- Sputum smear microscopy (most commonly used and most efficient method to identify pulmonary TB disease)
- Tests to diagnose TB infection (TB skin test or TB blood test)

Diagnosing TB among PWID can be particularly challenging due to a high prevalence of HIV among PWID.¹¹ PLHIV are more likely to have smear-negative pulmonary TB, which may delay the detection of TB.¹²

1.7 Treatment for TB disease

TB is treatable and curable with anti-TB medication.

TB bacteria are usually sensitive to TB medication. In this case, TB treatment typically lasts around 6-8 months. The most effective TB medications are so-called first-line drugs: rifampicin (RIF), INH, pyrazinamid and ethambutol. Taking these medications on a daily basis as prescribed by a doctor can cure TB disease.

It is very important for the client to follow the doctor's directions for taking prescribed medicines, comply with Directly Observed Treatment (DOT) regulations and finish the course of medicines exactly as prescribed, in order to avoid developing resistance to any of the anti-TB drugs.

DOT is a WHO-recommended TB case management strategy, in which each dose of the prescribed anti-TB drugs is administered and taken under direct observation by responsible medical personnel or by another designated individual (e.g. DOT worker). The DOT worker helps the client to take each dose of prescribed drugs every day, checks for symptoms and signs both of the disease and of drug side effects, and offers a reminder about the next scheduled visit to the client.

Usually, persons with drug-susceptible TB are no longer infectious after two weeks of effective therapy.⁹

Even though the individual becomes non-infectious and starts feeling better, TB medications still need to be taken as prescribed until treatment is complete.

1.8 Drug resistant TB, MDR-TB and XDR-TB

Properly implemented TB treatment can be highly successful, with cure rates greater than 95% for drug-susceptible TB. However, if the treatment regime is not followed properly, TB bacteria may develop resistance to some of the anti-TB drugs. The reasons for developing resistance to anti-TB drugs may include both internal (client related) and external factors.

These include:

- Failure of the patient to take medications exactly as prescribed
- Failure of the medical staff and/or DOT worker to provide the client with adequate education and information on TB treatment (i.e. the importance of adherence, timeframe of the treatment, possible occurrence of side effects and their management etc.)
- Failure of the medical system and medical/CBO personnel to respond to the needs of clients and to offer the support needed to persevere with treatment (e.g. poor management of side effects, absence of adequate substitution or addiction treatment)
- Treatment interruptions due to relocation, imprisonment, etc.
- Treatment interruption due to initial improvement of health conditions after beginning TB treatment
- Alternatively, it could be that the person was initially infected with MDR-TB bacteria

To begin with, TB bacteria develop a resistance only to one drug, but can also become resistant to more drugs. MDR-TB is a particularly resistant form of TB, being resistant to most effective first-line drugs (RIF and INH). Extensively drug-resistant (XDR) TB is a form of MDR-TB that is also resistant to any fluoroquinolones and at least one of three injectable second-line anti-TB drugs (amikacin, capreomycin or kanamycin).

People can get infected with drug-resistant TB (e.g. MDR-TB or XDR-TB) in two ways, either as a consequence of failing to complete treatment or by inhaling TB bacteria that is already resistant.

It is possible to treat drug-resistant TB but, as the most powerful first-line drugs are no longer effective and patients are treated with second-line drugs, **treatment lasts longer (20-24 months) and is more costly than treatment for less-resistant forms of TB. In addition, the second-line medications used have more side effects;** this, in turn, can contribute to low adherence rates, especially among PWID. However, CBOs can help a great deal in preventing TB transmission, detecting TB early and motivating clients to adhere to their treatment once started.

1.9 Case management during TB treatment

TB disease can be treated effectively in both an inpatient and outpatient setting.

Treating TB in an outpatient setting:

- means that TB patients are not separated from their families
- is cheaper than hospitalization
- enables to implement DOT successfully

Treating TB in an inpatient setting:

- allows for better control of infectious patients and their course of treatment
- provides patients with full-time medical help when needed

However, all the benefits of inpatient TB treatment can be achieved in outpatient care, provided there is proper organization and integration of services among outpatient service providers, including CBOs.

WHO strongly recommends the use of DOT as a central component of case management for the entire duration of TB treatment.

The DOT programme includes a number of other case management functions that are oriented towards patient needs, such as:

- Giving patients the opportunity to participate in their treatment arrangements (e.g. deciding where and when they will receive their TB treatment)
- Agreeing with the client about the specific details and conditions of the treatment, through an informed consent form
- Providing thorough education on TB both to the client and to key individuals in the client's social environment
- Psychological support
- Offering incentives and enablers to encourage adherence
- Providing social services to ensure the client's needs are being addressed so that adherence to therapy can become a priority (e.g. finding housing for homeless patients)
- Ensuring transportation of clients to clinics or reimbursing their transport expenses
- Establishing a system to keep track of clients through hospital discharge planning or after release from prison
- Providing TB treatment at opioid substitution treatment (OST) facilities or other relevant narcological care sites

1.10 TB prevention

The most important TB prevention measure is to diagnose persons with infectious TB quickly, start treatment immediately and to provide treatment until the person with TB is cured. This stops TB spreading from person to person.

TB prevention on an individual level

Vaccination

Bacille Calmette-Guérin (BCG) is currently the only available vaccine which protects against some forms of TB. Although the BCG vaccine does not prevent adults from getting TB, it is used in many countries with a high TB incidence amongst infants to prevent potentially fatal forms of childhood TB such as tuberculous meningitis and miliary tuberculosis.

Treatment of LTBI

Among those contacts of the client with TB who have potentially been infected, the following individuals should be treated for LTBI:¹³

- children under 5 years of age;
- individuals who are infected with HIV;
- individuals who are affected by serious comorbidities (e.g. persons who are immunosuppressed, organ transplant recipients etc.)

LTBI can be usually treated with a 6-month course of INH, which significantly reduces the likelihood of developing TB disease.¹ Treatment for LTBI is prescribed by a doctor.

General recommendations for TB infection control

There are simple preventative measures that everyone can take to prevent TB from spreading:

- Cough hygiene: covering mouth and nose with cloth or tissue when coughing or sneezing, disposing of the tissue in a waste bin and washing hands afterwards.
- Using natural ventilation: open windows regularly, air your office following the visit of any coughing client, opening doors and windows wide in order to create a draught (however, take care to ensure that contaminated air does not blow in your direction). Recirculation of air must be avoided.
- Separating people and giving individuals surgical masks or tissues if they are suspected of having infectious TB and are likely to transmit the infection to other people. This is especially important if the individuals concerned are in contact with members of particularly vulnerable groups such as children and PLHIV. Explain how masks should be used.

TB prevention in CBO

The TB infection control programme in CBO settings should be based on a four-level hierarchy of control measures including:

1. Managerial measures
2. Administrative measures
3. Environmental control measures
4. Personal protection interventions.

1. Managerial measures

- Establishing and reinforcing a local coordinating body for TB infection control (e.g. a responsible person in the CBO who would oversee successful implementation of infection control activities within the CBO).
- Developing a facility infection control plan.
- Conducting on-site surveillance of TB disease among CBO personnel.
- Monitoring and evaluating the set of infection control measures.

2. Administrative measures are the most important components of TB infection control. The aim of administrative measures is to reduce exposure to infectious droplets in the air and thus reduce the spread of TB infection. This can be done most effectively by ensuring that the recommended diagnostic investigations are performed rapidly on clients and staff suspected or known to have TB, and that, where necessary, treatment is begun swiftly.

Effective administration ensures prompt recognition of TB, and allows the separation of infected persons; it also makes for effective service provision, and achieves the aim of referring clients with potentially infectious TB disease. In specific outreach unit settings, administrative measures should also include **dividing clients in two groups: coughing and not coughing.**

Clients who cough are then provided with surgical masks and are given instructions on how to use them correctly.

3. Environmental control measures reduce the concentration of infectious particles in the air.

Environmental control measures include:

- **optimization of natural ventilation;**
- **use of artificial ventilation;**
- **implementation of air disinfection methods.**

4. Personal respiratory protective interventions can reduce the risk of inhaling infectious TB particles. This is especially important for CBO personnel who work with clients with presumptive TB. These interventions include the use of respirators by CBO personnel in the workplace (e.g. in CBO rooms or departments) when clients with presumptive or known infectious TB are present. Personal respiratory protective interventions must also be applied in other places with a high risk of TB transmission.

1.11 TB in specific populations

People who inject drugs

PWID are at high risk of TB infection and TB disease as they often have many social and demographic risk factors that put them at high risk of contracting TB. Such factors include: poverty, unemployment, homelessness, imprisonment, HIV infection, malnutrition and limited access to healthcare. Injecting drug use has also been an important factor in HIV-associated TB epidemics, especially in Eastern Europe.¹⁴

Treatment barriers, including poor adherence and limited access to healthcare, pose unique challenges in treating TB among PWID. However, the possibility of successful treatment of LTBI and TB disease among drug users has been demonstrated in a variety of contexts.³ With adequate support, stable care and experienced personnel, drug users can adhere to long-term treatment and can have clinical outcomes comparable to those who do not use drugs.¹⁵

People living with HIV

PLHIV are more likely to become sick with TB. Once infected with *M. tuberculosis*, the risk of developing TB disease is 20–37 times higher in those living with HIV, compared to those who do not have the virus.¹⁶

Antiretroviral therapy (ART) slows down the development of immunodeficiency in PLHIV. Thus, once a PLHIV is infected with TB, ART may delay the progression of TB infection to TB disease.¹⁷ In addition, TB disease preventive therapy (e.g. INH preventive therapy) is also used among PLHIV, reducing the risk of developing active TB disease by 33–62%.¹³

People infected with HIV who have TB disease can be effectively treated. Those with HIV who have LTBI can be given TB prophylaxis.

PLHIV with TB disease should receive treatment both for TB and HIV irrespective of the status of their immune system and CD4 cell count. PLHIV with LTBI should receive a 6-month prophylactic treatment with INH.

Correctional settings

Risk factors contributing to the high rate of TB in correctional facilities include:

- Overcrowding and inadequate ventilation
- Delayed diagnosis of TB
- Interruption of therapy caused by the movement of inmates into and out of facilities
- Language and cultural barriers, including lack of access to health information and stigma associated with the disease
- Relatively high rates of HIV infection among inmates
- Poor nutrition

However, these risk factors do not apply to all correctional settings, and the quality of conditions and services in these facilities can vary a great deal between countries and regions.

Migrants and international travellers

People who originate from countries where the incidence of TB is high, or who spend prolonged periods in these countries, have an increased risk of TB infection and disease. This risk of TB disease remains, even if individuals infected with TB move from countries where the risk is high to a different, lower-risk country. Therefore, it is advisable to ask the client whether he/she has been to or was born in a country with a high incidence of TB.^b

- **TB is an airborne infectious disease**
- **TB is treatable and curable with anti-TB medications**
- **Usually, persons with drug-susceptible TB can become non-infectious after two weeks of effective therapy**
- **The most important measure in TB prevention is to diagnose persons with infectious TB quickly, to start treatment immediately and to provide treatment until the person with TB is cured**
- **HIV infected people who have TB disease can be effectively treated**
- **HIV infected people with LTBI can be given TB prophylaxis**

^b Countries with a high TB incidence are: Afghanistan, Algeria, Angola, Anguilla, Argentina, Armenia, Azerbaijan, Bahrain, Bangladesh, Belarus, Belize, Benin, Bhutan, Bolivia (Plurinational State of), Bosnia and Herzegovina, Botswana, Brazil, Brunei Darussalam, Bulgaria, Burkina Faso, Burundi, Cambodia, Cameroon, Cape Verde, Central African Republic, Chad, China, China (Hong Kong SAR), China (Macao SAR), Colombia, Comoros, Congo, Cook Islands, Cote d'Ivoire, Croatia, Democratic People's Republic of Korea, Democratic Republic of the Congo, Djibouti, Dominican Republic, Ecuador, El Salvador, Equatorial Guinea, Eritrea, Estonia, Ethiopia, French Polynesia, Gabon, Gambia, Georgia, Ghana, Guam, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, India, Indonesia, Iraq, Japan, Kazakhstan, Kenya, Kiribati, Kuwait, Kyrgyzstan, Lao People's Democratic Republic, Latvia, Lesotho, Liberia, Libyan Arab Jamahiriya, Lithuania, Madagascar, Malawi, Malaysia, Maldives, Mali, Marshall Islands, Mauritania, Mauritius, Micronesia (Federated States of), Mongolia, Montenegro, Morocco, Mozambique, Myanmar, Namibia, Nepal, New Caledonia, Nicaragua, Niger, Nigeria, Northern Mariana Islands, Pakistan, Palau, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Portugal, Qatar, Republic of Korea, Republic of Moldova, Romania, Russian Federation, Rwanda, Saint Vincent and the Grenadines, Sao Tome and Principe, Senegal, Serbia, Seychelles, Sierra Leone, Singapore, Solomon Islands, Somalia, South Africa, Sri Lanka, Sudan, Suriname, Swaziland, Syrian Arab Republic, Tajikistan, Thailand, The former Yugoslav Republic of Macedonia, Timor-Leste, Togo, Tonga, Trinidad and Tobago, Tunisia, Turkey, Turkmenistan, Tuvalu, Uganda, Ukraine, United Republic of Tanzania, Uruguay, Uzbekistan, Vanuatu, Venezuela (Bolivarian Republic of), Viet Nam, Yemen, Zambia, Zimbabwe.

2. Recommended TB prevention and control activities in CBOs

2.1 Intensified TB case finding

Active case finding

Active case finding aims at identifying presumptive TB at the earliest possible stage in people who are not yet seeking medical attention for TB. It enables such individuals to be referred to health care facilities for screening and diagnosis of TB. Active case finding thus reduces transmission of TB in the community and increases the chances of survival in those who are diagnosed with TB.

When the client first visits the CBO:

- Emphasize the importance of screening for TB in a non-threatening manner.
All CBO personnel must be educated about TB and encouraged to be supportive and committed to testing the client for TB. In addition, all possible measures should be taken to protect client confidentiality.
- Interview the client using a short questionnaire about TB (example in TUBIDU TB Handbook¹⁸, Annex 1).
The questionnaire should include questions about current symptoms suggestive of TB and possible risk factors. Repeat the interview with the client once per quarter, unless the client presents visible symptoms suggestive of TB.

If TB symptoms are detected, the client should be referred immediately to a health care facility for further examination and diagnosis.

- **Ideally, every PWID should be screened for TB once a year** (using X-ray and sputum smear/culture or other appropriate investigations depending on local guidance and policies).
 - Where resources are limited, CBOs can refer only those clients to screening whose interview results reveal risk factors for TB or symptoms presumptive of TB.

These clients should be referred to a TB clinic for evaluation without delay.

An effective referral system should be established to refer clients to the nearest TB diagnostic centre. To ensure that the client will not get discouraged or “lost” on the way, make an appointment with the clinic and assign a support person to accompany the client to the clinic. Give the client written instructions with details of the location of the clinic as well as contact details and opening hours.

Simple incentives, such as hot or soft drinks and snacks are recommended to encourage clients to attend the screening. The CBO can also offer clients other health interventions (e.g. testing for blood borne viruses, including HIV) that can be carried out at the same time as TB screening. This can be especially beneficial for PWID, who tend to have a high rate of comorbidity with other viruses, such as HIV, and hepatitis B and C.¹⁹

Contact tracing

CBOs can be involved in contact tracing among hard-to-reach groups. Working alongside the National Tuberculosis Programme (NTP) and health care professionals helps CBO workers to trace the client's relevant contacts and to conduct contact investigations as part of outreach work. Organizing network meetings, round tables, training sessions etc. allows CBOs to form an agreement with relevant bodies on how to be involved in contact tracing or other TB related procedures. For example, local TB services can inform CBOs to contribute to contact tracing, if a client with infectious TB is detected. CBOs can also inform NTP or TB diagnostic centres about clients with presumptive TB and refer clients for further examination.

All close contacts (i.e. persons sharing the same airspace for prolonged and/or repeated periods of time), irrespective of age, **should be informed about their exposure to TB and encouraged to screen for TB.** Family members and other close contacts of the client with active TB disease have the greatest risk of becoming infected. Among them, children under 5 years of age, the elderly and those infected with HIV have the highest risk of developing TB disease. Therefore, it is recommended that these persons be subject to regular clinical monitoring and receive treatment for LTBI, once they have been identified.

Contact tracing among PWID can be done by:

- working with peers of former drug users to encourage identification of PWID's close contacts;
- using simple incentives to encourage contacts to attend screening for TB.

Active referral to health care services

CBOs should establish good collaborative relationships with NTPs, TB clinics and other CBOs working with PWID in order to develop effective TB referral pathways for hard-to-reach groups. **In the event that a PWID with presumptive TB arrives at the CBO, the client can be promptly referred to TB diagnostic facilities.**

For active referral, it should be ensured that:

- Appointments for clients are scheduled smoothly and efficiently.
It may be helpful to provide clients with a scheduled TB clinic appointment and assign someone from the CBO to accompany the person to the TB clinic.
- If the referred client misses the first clinic appointment, a second appointment should be scheduled and the client should be carefully followed up.

When referred to the TB clinic, both clients and accompanying persons should receive written instructions outlining the location, as well as giving contact details and opening hours of the TB clinic.

In addition, all close contacts of clients with confirmed TB disease who have symptoms of TB should be referred to the clinic immediately to be tested for TB.

2.2 Infection control

All CBOs should conduct TB risk assessment of their setting. Based on assessed risks of TB and exposure to the disease, CBOs should develop a written TB infection control plan that outlines necessary activities to decrease the risk of TB infection in the CBO as well as among PWID and people who work with PWID.

Infection control measures to be taken regularly include:

- Implementing effective work practices for the management of clients with presumptive or confirmed TB disease.
- Training and educating CBO personnel about TB, with a specific focus on prevention, transmission, and symptoms of TB.

- Screening CBO personnel who are at risk of developing TB disease; CBO personnel should be screened for TB upon employment and should then receive routine screening once every 2 years. Screening should include chest X-ray or other appropriate investigations depending on local guidance and policies.
- Using appropriate signage, advising individuals to follow respiratory hygiene practices and cough etiquette.
- Collaborating with the local NTP, TB clinic and other CBOs.

Infection control measures when in contact with a client with presumptive TB disease:

- Keep the client in isolation in one room.
- Limit the number of CBO personnel who can enter the isolated room and who work closely with a potentially infectious TB client.
- Use personal respirators (if possible).
- All clients with presumptive or confirmed TB disease should be educated on cough etiquette and be provided a paper tissue or a surgical mask. This reduces the level of infectious particles being expelled into the air and lowers the risk of TB transmission.
- During or after meeting the client in the isolated room, open a window to air the room. This helps to reduce the amount of droplet nuclei in the air that carry TB bacteria.

CBOs whose clients are at risk of TB should put environmental measures in place to help reduce the number of infectious particles in the air:

- Ventilation should be checked on a regular basis (at least twice a year) to ensure that it is working effectively.
- Upper room ultraviolet germicidal irradiation may also be useful in some settings, if resources are available.

Outreach services for clients with presumptive TB are also recommended. It is important that CBO workers educate both their clients with confirmed TB diagnoses and clients' family members to ensure that the client and all members of their contact circle follow general recommendations for infection control in their homes and other places, especially indoors.

2.3 Isoniazid preventive therapy

PWID are one of the priority populations in which it is necessary to identify LTBI in order to prevent those infected with TB from developing TB disease.²⁰ **Ideally, all PWID should be screened for LTBI** using a tuberculin skin test (Mantoux) or a blood test (e.g. interferon-gamma release assay), depending on local guidance and policies.

INH is given by doctors to individuals with LTBI in order to prevent progression from TB infection to active TB disease. Usually it is prescribed for at least six months as a self-administered therapy. Individuals being treated with this medication should be seen at the TB clinic once a month.

Providing adherence support measures, including DOT, if resources are available, ensures completion of INH preventive therapy among PWID. Once the client has started INH in a TB clinic, the CBO can provide INH on site daily or three times a week following the same procedure as DOT. In OST sites, INH may be given alongside methadone.

Before starting LTBI treatment in the CBO, CBO personnel should receive additional training. All clients on INH therapy must be monitored for signs and symptoms of adverse reactions to INH or other medications throughout the entire course of treatment (see TUBIDU TB Handbook¹⁸, Annex 2).

IPT can be prescribed only when the possibility of active TB is excluded. If a person has active TB, IPT may cause resistance to TB drugs. Pregnancy is not considered to be a contraindication for IPT. Moreover, those who have tested positive for HIV should be encouraged to take the therapy due to their increased risk of developing TB disease.

2.4 Supporting clients on TB treatment

Case-management and Directly Observed Treatment

Clients found to have TB disease will be placed on appropriate therapy by the local TB clinic. Supervision of therapy and follow-up examinations are usually the responsibility of the TB clinic. As a rule, clients should be re-admitted to the CBO when they are non-infectious.

The CBO should work in collaboration with social workers and the health facility where the client with TB is being treated, to develop a case management plan for the PWID. This will support adherence to treatment and help to resolve the client's social and psychological problems.

In CBOs, it is highly recommended that DOT be used for TB treatment. DOT should be combined with HIV care, OST and other treatment interventions (e.g. co-trimoxazole) or medication regimens. This makes both TB and other treatments easily accessible to PWID and eliminates the need to attend multiple sites at multiple times.

Before re-admitting the client to a CBO to continue TB treatment, TB clinics should confirm that the client is non-infectious. If the client is still infectious, then outreach services or home visits are advised. In this case, CBO personnel should wear respirators and the client should wear a surgical mask during any close contact that takes place indoors.

At OST sites, clients on TB treatment should receive their TB medication together with the appropriate methadone dose. Methadone and other suitable types of narcological care can also serve as an adherence tool.

Those CBO workers who perform DOT should be trained in the implementation of DOT and receive additional payment from the NTP, TB clinic or through local fund raising opportunities (e.g. municipal financing, social/welfare services funds).

DOT workers whose clients include PWID should be trained on issues related to substance abuse. More specific training should be provided on how drug use influences the behavior of DOT clients and ways in which this might affect their treatment adherence.

The DOT worker:

- Supports and motivates the client during the long treatment process
- Watches the client swallow each dose of anti-TB medication
- Asks about any side effects of anti-TB drugs, and observes the client for apparent side effects. (see TUBIDU TB Handbook¹⁸, Annex 2)
- Documents all relevant information regarding DOT administration.

Side effects of TB drugs

As with all drugs, TB medication can cause side effects. When severe, these can have physical and psychological implications and can have a negative influence on TB treatment adherence. The majority of side effects of TB occur only at the beginning of treatment and go away on their own after a few weeks. Clients should be educated about possible side effects of TB drugs. During outpatient TB treatment, the client typically meets the TB doctor once a month, while the CBO worker who implements DOT meets the client every day. Thus, it is very important to keep asking the client about the onset of any new symptoms or possible side effects of TB medication.

Remind the client to report to a health care facility immediately, if he/she experiences severe side effects. Common side effects of TB drugs are listed in the TUBIDU TB Handbook¹⁸, Annex 2. It should be acknowledged that second-line TB drugs used for the treatment of MDR-TB are more toxic and are more likely to cause side effects. In addition, side effects appear more frequently amongst those infected with hepatitis B or C and those taking ARV drugs, as well as in heavy drinkers.

Drug interactions

Comorbidity, including viral hepatitis infection (such as hepatitis B and C), should not contraindicate HIV or TB treatment for PWID.¹ Furthermore, alcohol dependence, active drug use and mental health problems should not be considered as reasons for withholding treatment.

RIF is an effective anti-TB drug, yet it has been reported to interact with other medications. For example, RIF:

- Increases the excretion of methadone and causes withdrawal symptoms in some patients. Thus, methadone dosages may need to be increased among those receiving TB treatment.
- Interacts with many antiretroviral medicines such as protease inhibitors and non-nucleoside reverse transcriptase inhibitors. Consequently, these drugs are usually not co-administered.
- Decreases the effect of hormonal contraceptives; therefore, female clients should use other birth control methods if they want to prevent pregnancy during TB treatment.

INH, another commonly used and highly effective anti-TB drug can increase the blood levels and effects of methadone. To counteract this, methadone dosage needs to be adjusted.

Risks

- There is a potential risk that TB treatment can harm the liver. Liver damage is more likely and more serious in people who are heavy alcohol users and those who are infected with hepatitis C.
- Inform the client about the risks to the liver presented by consuming alcohol and taking paracetamol (acetaminophen) during TB treatment. In the event of headaches, joint or muscle pain and fever, alternative painkillers such as ibuprofen or aspirin should be taken.
- Inform clients about the effects of smoking on the lungs. Smoking cigarettes can scar the lungs and prevent them from clearing sputum or phlegm effectively.
- Ask female clients whether they are or may be pregnant. If a client becomes pregnant, she should inform her doctor immediately. Treatment may need to be reconsidered in order to find the most appropriate regime for curing TB.

Finding clients lost to follow-up

CBOs can participate effectively in finding both clients with presumptive or diagnosed TB disease who have stopped using TB services prior to completing their diagnostic investigations, and those who cease to attend treatment before they have completed their full treatment course. Improving collaboration with NTP and local TB services enables CBOs to get clearer instructions on how to increase their involvement in implementing TB treatment among PWID and in finding clients lost to follow-up.

When the client visits the CBO for the first time, CBO personnel should try to collect some contact details (e.g. address, phone number) of the client as well as of people (friends, relatives, neighbours etc.) in the client's social network. Collecting the client's contact details could be helpful in re-establishing contact or finding the client in the future, if necessary. This is especially important during TB treatment (e.g. DOT), where losing the client to follow-up may have serious consequences for his/her treatment outcome.

If the client has missed 2 appointments:

- contact the client by telephone;
- make one or more home visits within the next couple of days.

If the client doesn't answer the phone or is not at home:

- ask the family or neighbours about possible locations where the client may reside and try to obtain any other useful information that may facilitate finding the client;
- leave notifications and messages (e.g. with the client's neighbours and relatives);
- look for the client in places where he/she usually spends time (this can be done by the harm reduction outreach worker or peers of former drug users).

However, regulations regarding confidentiality must be strictly followed during home visits and when contacting clients' family or acquaintances to avoid compromising client confidentiality in terms of medical details and other sensitive information (see subsection 2.6. Client confidentiality).

When the client is found:

- talk to the client and the family about possible reasons for the interruption of treatment;
- when the cause of the problem has been identified, try to help the client resolve the issue in question and prevent it from recurring;
- remind the client about the dangers of interrupting treatment, but also congratulate the client on how much has been accomplished so far, emphasizing the importance of continuing with treatment at this stage, even though the symptoms of TB may have subsided and the side effects of anti-TB drugs may be unpleasant.

If the client has permanently relocated, try to find out his/her new location and notify the NTP. This may enable the client to be transferred to another CBO.

Together with the NTP, CBOs should explore the legal possibilities of patient-related information exchange. If legally possible, actively seek information about those clients and persons who have been identified as potentially having TB disease, in order to refer or accompany them into the TB clinic.

2.5 Promoting adherence

Specific adherence support measures are needed for drug users to:

- ensure the best possible treatment outcomes for TB;
- reduce the risk of developing resistance to anti-TB drugs;
- reduce the risk of TB transmission to other people.

PWID who are engaged in stable care with experienced personnel and provided with adequate support can adhere to long-term TB treatment, and have clinical outcomes comparable to those who do not use drugs.¹

Barriers to adherence can vary between settings. Thus, services should start by consulting with PWID and their representatives in order to find the most effective ways to overcome possible barriers and find the best local solutions. The most important thing CBO personnel can do is to help the client see the causes of adherence problems.

Together with the client:

- define possible problems and obstacles that may occur;
- seek solutions;
- anticipate future problems.

It is important to analyze and review the adherence problems faced by the client on a regular basis in order to avoid their reoccurrence.

Evidence indicates the effectiveness of different adherence support strategies, such as:¹

- adherence reminders (timers, pill boxes);
- adherence counselling (both professional and peer-led support);
- contingency management;
- motivational interviewing;
- cognitive and behavioural interventions;
- OST or other relevant narcological care;
- ancillary services.

Motivational interviewing is a collaborative, person-centred form of guiding to elicit and strengthen the person's motivation for change. It aims to develop internally motivated change as opposed to more externally-driven methods that are often used.

- Different coping strategies for dealing with high-risk situations are suggested and discussed with the person.
- Behavioural change is monitored and commitment to change is also continuously encouraged.

A motivational interviewing approach has been used successfully with PWID both to improve their engagement with treatment and to reduce their problematic behaviour.

Cognitive and behavioural interventions teach individuals to identify and correct problematic behaviour by applying a range of different skills. These techniques can be used to reduce drug use as well as to address a range of other problems which may be coexistent. A central element of this intervention is to anticipate potential problems and to enhance the person's self-control by helping to develop effective coping strategies.

Specific techniques include:

- exploring the positive and negative consequences of one's behaviour;
- self-monitoring to recognize risks early on and to identify situations that might put one at risk of discontinuing TB or other treatment;
- developing strategies for coping with problems and avoiding high-risk situations.

Contingency management means that participants are rewarded for positive behaviour with regard to their health, and for the outcomes of this. Such interventions may include:

- direct financial compensation;
- token economy systems such as vouchers;
- positive reinforcing medications (most commonly methadone);
- material incentives (e.g. bus tokens or electronic items).

Voucher-based reinforcement means that the client receives vouchers with various monetary values for engaging in a particular behaviour (e.g. returning for a TB skin test or TB DOT appointment). Once earned, vouchers can be exchanged for goods or services such as food or shopping.

Ancillary services include complex factors, such as social stability, education, housing situation and socioeconomic status.

A very important issue for many PWID is **social support and social care**.⁷ Many structural factors related to housing and economic wellbeing have proven to have a major impact on the quality of life and risk of infection for many drug users. Provision of supportive services that address the extensive needs of PWID such as housing, food, and low-threshold employment opportunities are likely to have a positive impact on the person's health-related outcomes.

CBOs should provide clients with integrated services such as counselling, syringe and needle exchange, the distribution of condoms, OST, overdose prevention, shower and laundry facilities, food, access to computers, etc. to support the client's adherence to TB treatment.

2.6 Client confidentiality

Protection of confidential patient information is commonly referred to as confidentiality and is an essential issue in many different aspects of TB control.

Measures to protect client confidentiality:

- Never discuss a client's case with anyone without the client's permission (including family or friends)
- Do not leave hard copies of forms or records where unauthorized persons may access them
- Use only secure routes to send client information
- Be discreet when making client visits
- Conduct client interviews in private
- Do not discuss client cases in a public area

2.7 Information, education and counselling (IEC) of clients, their close ones and community

The aim of IEC is to increase awareness of the basic facts about TB amongst clients, their families and those close to them, as well as in the community at large. IEC also seeks to offer supportive psychosocial services (e.g. counselling) to clients and those close to them. CBOs can change negative attitudes towards TB and influence the perception of what is socially normal and acceptable by distributing adequate information about TB and raising levels of awareness in the community. These activities have an important impact on TB prevention and care, and also contribute to changes in individual and group behaviour.

It is beneficial to involve former PWID who have previously been treated for TB and are now cured in different CBO activities. Former clients can help improve counselling and communication between clients with TB, their families and TB treatment providers.

Clients should understand the importance of knowing their HIV status, their rights to receive INH preventive therapy as well as rapid TB diagnosis and treatment. They should also be aware of that TB is spread through the air by coughing, sneezing or talking, and that they should be encouraged to adopt good coughing practices (e.g. cough etiquette).

It is also important for CBOs to be well acquainted with their national legislation and normative acts related to TB care. This facilitates consultation with the client regarding the necessary steps for receiving TB diagnosis.

2.8 Examples of community-based TB activities⁶

- Raising awareness, producing communications on behavioural change and community mobilization
- Reducing stigma and discrimination
- Screening and testing for TB and TB-related morbidity (e.g. HIV counselling and testing; diabetes screening) including through home visits
- Facilitating access to diagnostic services (e.g. sputum or specimen collection and transport)
- Initiation and provision of TB prevention measures (e.g. INH preventive therapy, TB infection control)
- Referral of community members for diagnosis of TB and related diseases
- Treatment provision and observation for TB and co-morbidities
- Treatment adherence support through peer support and education as well as through individual follow-up
- Delivering DOT
- Social and welfare support (e.g. food supplementation, income-generation activities)
- Home-based palliative care for TB and related diseases
- Community-led local advocacy activities

Essential actions to integrate TB activities into the work of CBOs²¹

1. Understanding TB, TB/drug use, and the global context
2. Knowing the TB situation in your country (or your area)
3. Knowing and understanding the needs of your target group and clients
4. Choosing activities suitable for your organization
5. Creating or strengthening appropriate partnerships, for example with TB patients and with communities of PWID and PLHIV
6. Planning, implementing and measuring the success of your activities
7. Funding your activities

- Ideally, all PWID should be screened for TB once a year
- In the event that a PWID with presumptive TB arrives at the CBO, the client can be promptly referred to TB diagnostic facilities
- All close contacts of CBO clients with TB disease should be informed about their exposure to TB and encouraged to screen for TB
- All CBOs should conduct TB risk assessment of their setting
- It is highly recommended that DOT be used for TB treatment in CBOs
- CBOs can participate effectively in finding clients with presumptive or diagnosed TB disease who have stopped using TB services
- Specific adherence support measures are needed for PWID during TB treatment

3. Example of a self-assessment checklist of TB related activities for CBOs

This self-assessment checklist is intended for measuring the extent to which the organization is implementing good practices. All CBOs should select the most relevant and useful questions from this list, applying them to their own work.

These questions help to identify areas in which the CBO has already achieved 'good practice', and to highlight areas that need to be developed and strengthened.

Yes	No	
		1. Are CBO personnel in your organization adequately trained on current TB information, screening procedures and treatment support (social support, psychological counselling, treatment incentive distribution etc.)?
		2. Do you conduct regular training for CBO personnel on TB-related issues?
		3. Does your organization have a written infection control plan?
		4. Are your CBO personnel trained according to the infection control plan?
		5. Is the infection control plan actually implemented?
		6. Are all members of your CBO personnel screened for TB (upon employment and periodically)?
		7. Are protection devices available for CBO personnel and clients (paper tissues/surgical masks/respirators)?
		8. Does your organization screen clients for TB (at first attendance and periodically thereafter)?
		9. Does your organization have a standardized record-keeping system in place?
		10. Is an information exchange system with the TB clinic or NTP in place?
		11. Is a referral system to the TB clinic or NTP in place?
		12. Are incentives/enablers available for referring clients to the TB clinic?
		13. Are incentives/enablers available to support treatment?
		14. Are incentives/enablers available for conducting contact tracing and finding clients lost to follow-up?
		15. Are educational materials on TB available for clients?
		16. Are there opportunities to train peers to support the clients in TB screening and treatment?

Indicators

- Clients with correct knowledge about TB (such as mode of transmission, symptoms, curability etc.) (out of all clients; percentage).
- Number of clients counselled for TB on first visit (out of all clients; number; percentage).
- Number of regular clients receiving annual counselling/screening for TB (out of all clients; number; percentage).
- People with presumptive TB identified within the CBO (number).
- People with presumptive TB referred to TB diagnostic services by the CBO (number; percentage).
- Clients with confirmed TB disease (number).
 - Proportion of clients starting LTBI treatment during a specific time period who successfully complete treatment (percentage).
 - Proportion of clients starting treatment for TB disease during a specified time period who successfully complete treatment (percentage).
 - Clients on TB treatment receiving incentives or enablers for treatment adherence (number; percentage).
- Close contacts of clients with TB disease referred to screening for TB (number).
- Proportion of CBO personnel trained according to CBO training plan (percentage).
- Proportion of CBO personnel screened for TB upon employment (percentage)
- Proportion of CBO personnel screened for TB every 2 years (percentage)
- Existence of written infection control plan (yes/no).
- Availability and use of protective devices: paper tissues/surgical masks/respirators (yes/no).

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