Developing Tuberculosis Treatment Services for People Who Use Drugs

Trainer’s manual

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ABBREVIATIONS AND ACRONYMS

AFB  Acid fast bacilli
AIDS  Acquired Immune Deficiency Syndrome
ART  Antiretroviral therapy
CBO  Community-based organization
CPT  Co-trimoxazole preventive therapy
CSO  Civil society organization
CTC  Combined Therapy Centre
DOT  Directly Observed Treatment
DOTS  The basic package that underpins the Stop TB Strategy
DST  Drug susceptibility testing
EECA  Eastern Europe and Central Asia
EHRN  Eurasian Harm Reduction Network
EPTB  Extrapulmonary tuberculosis
HAART  Highly active antiretroviral therapy
HBV  Hepatitis B Virus
HCV  Hepatitis C Virus
HIV  Human Immunodeficiency Virus
ICF  Intensified TB case-finding
IGRA  Interferon-gamma release assays
IPT  Isoniazid preventive therapy
LPA  Line probe assay
MDR-TB  Multidrug-resistant tuberculosis (defined as TB caused by strains of M. tuberculosis that are resistant to at least isoniazid and rifampicin)
NGO  Non-governmental organization
OSF  Open Society Foundations
OST  Opioid substitution treatment
PLHIV  People living with HIV
PDC  Pulmonary Diagnostic Centre
PPD  Purified protein derivative
PWID  People who inject drugs
PWUD  People who use drugs
TB  Tuberculosis
TB-IC  Tuberculosis infection control
TST  Tuberculin skin test
UN  United Nations
UNAIDS  Joint United Nations Programme on HIV/AIDS
WHO  World Health Organization
XDR-TB  Extensively drug-resistant tuberculosis (defined as MDR-TB plus resistance to a fluoroquinolone and at least one second-line injectable agent: amikacin, kanamycin and/or capreomycin)
Introduction

This training manual was developed by EHRN as part of a joint action with WHO and the EC Executive Agency for Health and Consumers in response to TB epidemics among injecting drug users (IDUs) in Eastern Europe and Central Asia. The emphasis of the project is a comprehensive response to HIV, TB and drug use and the inclusion of established linkages between HIV prevention, TB control and harm reduction strategies and services. The training manual is meant to increase the capacity of community-based organizations (CBOs) and non-governmental organizations (NGOs) working in the harm reduction field to provide TB-related services and technical support and to engage in advocacy actions to increase access to TB services for people who use drugs (PWUD).

The manual has been written for people who are responsible for delivering treatment and care for PWUDs, including those working in harm reduction, drug treatment or other health and social care services. It compiles clinical and programmatic WHO information about TB, HIV and drug use and strives to present it in a way that is suitable for service providers or CBO and NGO staff without special clinical training. The importance of this training is to convey vital information for CBOs and NGOs, which will relay it to their target group and help prevent infection and avert morbidity and deaths.

Training guide

The manual is structured around a three-day learning programme with modules that introduce TB, diagnostic tests and procedures, general principles of treatment and care and provides supporting evidence and analyses TB prevention and infection control issues. The manual aims to develop participants’ understanding of best practice in TB treatment and care for PWUD and provide a basis for training and building capacity to design effective support and service delivery systems to reduce the impact of TB.

Although the manual is designed for three days, the programme is modular and intended to be easily adapted according to specific people’s needs, the local situation and the opportunities and resources available. The training could be delivered over three consecutive days or as a single module at a time, which might reduce the disruption to the organization’s work. The content can also be used selectively, using only those modules which are the most relevant for the specific audience.

The training can be adapted for delivery to people who are completely new to working with PWUD and/or TB and can also be used as a refresher course for people who already have experience in the field. It uses a participatory, interactive approach which provides many opportunities for participants to share their questions, uncertainties and expertise in ways that are suited to their own group.

The manual provides guidance on preparing and delivering training and also contains supporting content for facilitators and background information on the topics. The trainer should bear in mind that TB services vary substantially across countries. In some countries PWUD have access to a wide variety of the latest treatment options; in others there are still a lot of obstacles for people to receive treatment and keep receiving it. Having local knowledge on TB prevalence, treatment and care options will help the trainer to adapt the programme to their audience’s specific needs.

Using the manual

People using this manual to support the delivery of the training need to be familiar with its content and have skills in delivering training. The manual outlines basic principles required for the training. The
course is structured around a three-day training programme, with each day being seven to eight hours including two coffee breaks and lunch. Each module has its approximate duration indicated, although this will depend on the participants’ knowledge, experience and specific needs. The authors suggest completing exercises in the order presented and according to the indicated time.

The training programme is structured to allow flexibility of use appropriate to local learning objectives and participants’ abilities and needs. It is designed to help you to select the most relevant modules and presentation slides for the audience. The training structure allows facilitators to look for illustrations and figures from participants’ own experiences and best practices and encourages them to make any adjustments in accordance with the specific context. Trainers are encouraged to follow the guidelines and refer to the recommended readings. However, the manual is advisory and can be constantly updated. Particular attention should be paid to the practical and learning needs of PWUD invited to the training.

The training manual is designed for a group of up to 20 participants – ideally, 14–16 persons. Much smaller or larger groups may require specific preparation and modification of the curriculum, timing, learning activities and participants’ contributions.

Preparing the training

Make sure to familiarize yourself with the training manual before delivering the training. Read the modules and their corresponding presentations and handouts. Ensure that your knowledge is up to date by familiarizing yourselves with the accompanying resources, guidelines and recommended reading materials.

Check for local examples, illustrations and statistics to update slides and expand on the materials provided.

Venue

The venue for the training should provide opportunities for a fluent learning process without distraction. Make sure it is suitable to accommodate a group of up to 20 people. Bear in mind that the training incorporates both whole-group and small-group activities. The location should be easily accessible for the participants. Specific consideration should be paid to the needs of participants with disabilities or special needs. You may need to give specific instructions relating to travel, parking and public transport.

Participants

Ensure that all participants have received the workshop outline and are aware of the learning objectives before the workshop. You may provide them with the references to the resources and additional reading materials to help them to prepare for the training.

Since PWUD may attend the workshop, either as trainers or participants, it is particularly important to check for the availability of opioid substitution treatment (OST) support for those who need it. If necessary, any special request needed for the inclusion of foreign clients in the programme should be made beforehand.

Since some participants may have specific dietary requirements, either because they are on a certain treatment or simply for their personal beliefs, you should make sure that a specific diet is available and requirements for food related to certain treatments are met. It is recommended to address the needs of vegetarians and vegans.
The participants’ invitations may include arranging travel and/or offering travel costs and an attendance fee. Consider what arrangements are needed for those receiving or requiring OST to support their attendance and participation, and consider how the programme timing can be adjusted to meet the needs of PWUD.

**Facilitators**

For smaller groups, a single facilitator can usually administer the workshop effectively. This workshop initially intended for a group size of up to 20 people and requires at least two facilitators to enhance and maintain the quality of the training and manage the various group activities. If you are planning to have a bigger group – more facilitators should be involved. Make sure that your co-facilitators are familiarized with the workshop materials and feel comfortable running a workshop.

Co-facilitation may include other professionals, advocates or experienced PWUD. Consider whether there are opportunities to establish relationships with local TB medical experts or PWUD or others affected by TB who can support your training and increase your knowledge and confidence in the subject area.

Have a facilitators’ meeting before the workshop to agree on the agenda, roles and responsibilities in running the workshop. During delivery facilitators should confer with each other after each module to address any issues that arise (such as engaging participants who have been less involved than others). Delivering training with co-facilitators allows for note-taking to record important discussions and questions as they arise and can serve as a record for subsequent follow-up.

**Material checklist**

This manual contains training materials that can be used during various training sessions. However, you should also feel free to think creatively about ways in which these can be incorporated into exercises or other training methods. There are other resources on the topic, many of which have been developed for the specific situation in certain countries. When you are preparing training materials for the workshop, feel free to contact local institutions (such as ministries that deal with health, the police, narcotics, justice, public security, youth affairs), WHO/United Nations organizations and international and local NGOs to see whether any relevant materials are available. These materials may include training guidelines, case studies, checklists, videos, brochures or reading materials.

*Handouts* – copy sufficient course handouts and relevant materials for the number of workshop participants and have these ready for distribution at the start of the training.

*Module completion certificate* – should be supported by the agency responsible for the training and confirm attendance on completion. This may be useful for people who have to demonstrate ongoing professional development. For some people this also boosts participation and motivation during the training and enhances the way it is used subsequently.

**Training delivery**

*Before the workshop starts* – think about the time and space in which the group will be working. Arrange the chairs so that everyone can see all the other group members. Make sure you know the agenda and timings of the session, so you can present it for the participants. Think of any equipment you will be using in the session and check that it works (computer, projector, markers etc.). Make catering arrangements for coffee breaks and lunch. Arrive in plenty of time on the day so that you can feel in control of all of the above.
Starting the workshop – once participants have arrived and gathered prior to the workshop, start at the agreed time. Open the workshop by welcoming the participants, introducing yourself and any co-facilitator. The training should always start with a round of introductions: usually, everyone in the group takes turns to state their name, where they work, and – if they wish – something about their background. This should be non-demanding and allow the individual to offer something about themselves to the group.

Initiating the first module – after the introductory exercise summarize the outline of the day, timings and how the workshop will proceed. Ensure that you are familiar with all practical arrangements at the workshop venue, such as the location of coffee breaks and lunches, toilets, expected fire drills, gathering points and so on, and convey these to the workshop group.

Group rules – define the workshop rules and attendance and state the behaviour you expect from participants. It will be easier to deal with unhelpful behaviour if it occurs. This is best done as an extension of the introduction and expectations section. Ask the group members to suggest ‘ways of working’ they would find helpful. Put the rules up on a flipchart as they are stated and keep the sheet in a visible place so that the rules can be referred to if necessary.

Depending on the cultural background and specific characteristics of the workshop participants, you may wish to consider rules such as:

- Arrive on time for the beginning of each module and after each break
- State opinions honestly so that we can benefit from frank discussions
- Questions may be asked freely at any time
- One person speaks at a time (particularly vital with translation)
- Comments should be made to the whole group: no side conversations
- Listen to a person’s full opinions or ideas and do not react immediately: in this way we can consider what we really think of a new or opposing idea, instead of just reacting to it
- Work towards resolving conflicts rather than taking up inflexible positions
- Discuss ideas or opinions, not the person expressing them
- Agree to switch off mobile phones and laptops while in the training room
- No violence (verbal/physical): people must feel free to express opinions that may not be popular so that we can learn from these opinions
- No smoking in the training room, and no alcohol or drug consumption during the workshop modules.

Confidentiality within the training should be discussed and agreed. Participants should not share any sensitive information disclosed during the training with others (e.g. challenging or compromising practice issues, current or former drug use or similar disclosures). It should be emphasized that participants are responsible for their own judgements about what they may contribute within the training. It should be made clear that confidentiality is not absolute – child protection concerns, violence or suicidal intentions are not bound to confidentiality.

Workshop expectations can be useful to gain an understanding of individual and collective expectations. Be clear that all participants should have the opportunity to express what they are hoping to achieve. Generally, expectations should be written on flipchart paper, as they will be presented to the whole group. If anyone’s expectations are very different from the training’s learning objectives, this needs to be addressed clearly from the outset.
**Ending modules** – at the end of each module, let the group know that they are reaching the end of the available time. This will also help you to bring the discussion to a close and draw conclusions. Offer a summary at the end of each module and a more comprehensive one at the end of the workshop.

**Workshop methodology**

This training has been designed to include a range of formats and styles to help address diverse learning styles. Before beginning the workshop, it is sometimes useful to employ an exercise known as an ‘ice-breaker’ to help participants become comfortable with each other and with the facilitators. In some groups, simple introductions may be sufficient. Ice-breaking exercises can also be used if tension has risen to a high level among participants, if facilitators sense that frustration is rising, or to begin each day of a multi-day workshop.

**Group discussion** – when discussions are going on among the whole group, seat yourself and co-facilitators as part of the circle; this gives a non-verbal message that you are giving up your position of authority for a while to allow a very frank discussion.

**Lecture/didactic presentation** – when you are lecturing, you may want to stand, since this draws attention to you. It may also give you a certain level of authority, although this is a matter of personal preference and teaching style. Lectures can be a less engaging form of training delivery but are important for communicating key information. There are many ways to perform a lecture, such as combining it with questions to the audience and interactive communication.

Use questions and feedback to break up the lecturing process, especially if the participants are becoming bored. Ask questions to clarify whether everyone has a similar level of basic knowledge, before moving on to new topic. Ask what participants know or feel about a particular topic. It can be helpful to clarify whether they have had any experience of the subjects being discussed.

**Small group work/exercises** – irrespective of the length of the small-group task, the main objectives for the small group need to be established and clear before it is formed. Everyone needs to be aiming to achieve the same thing from the group work – otherwise, it is unlikely that the group will be able to work as a unit. Facilitators should assure that all members of the group actively participate in the exercise. After the work in a small group there should be reflection among the whole group. Before the group starts its task, nominate one person who will be reporting back. Allow sufficient time for the small-group reports.

**Role-playing, exercises and games** are often valued elements of training. Often, participants remember the sensation of being in a particular role or playing a game more strongly than they remember other information. These techniques are particularly useful for developing skills. While other training techniques can increase knowledge, skills are normally enhanced through practice. Role plays could help participants to feel what it might be like to be, say, a PWUD concerned and anxious about the significance of their HCV status and treatment options. They can help participants to think about their attitudes towards people who inject and other drug users. Activities that involve physical movement can be especially useful after lunch, when energy levels are often lower.

**Brainstorming** is a method used to collect opinions and information rapidly, generate ideas and develop solutions to problems creatively. Brainstorming can help you choose a topic, develop an approach to a topic, or deepen your understanding of the topic’s potential. Basic rules for brainstorming:

- The question should be clear
Allow participants a few moments to contemplate the question before being given the chance to offer answers, comments or ideas
Everyone should participate
There should be no immediate criticism or discussion of the ideas presented
Ideas are recorded on a flipchart (usually by a facilitator while the co-facilitator fields key words or phrases called out by participants)
The process should move quickly
A time limit should be set.

Case studies can be defined as training methods where participants examine a story that involves real situations and people. These methods are among the most powerful tools in training. ‘Real-life’ situations, especially when these can be personalized by participants, tend to have a very strong impact on learning. Make sure you prepare several case studies and make enough copies to hand them out to all participants.

Evaluating the training
Evaluation is an important part of the training process because workshops develop organically over time as knowledge and understanding changes. The workshop evaluation process is designed to help you to assess participants’ reactions to the workshop and to determine its effectiveness. It is often useful to prepare a summary report based on the results of the evaluation to help either you or other trainers to offer similar workshops or courses in the future. Such a report should include:

- the name of the workshop, dates and venue;
- the organizers and commissioners of the workshop;
- the facilitators’ names (and organizations they represent);
- participants’ names and brief information about them (e.g. their workplace, locality, contact email addresses);
- trainers’ comments on major issues that arose during the workshop;
- the results of the workshop/course evaluations, highlighting those that are significant;
- recommendations for changes to course materials, methods and participant selection.
BACKGROUND

This overview serves as background and rationale for the training module ‘Developing Tuberculosis Services for People Who Use Drugs’. It refers to the evidence-based and internationally recognized approaches to TB diagnostics, prevention and treatment and access to TB services for PWUD. The term PWUD includes people who inject drugs (PWID) and non-injecting users, unless specified.

Introduction

According to WHO, in 2010, there were 8.8 million cases of and about 1.4 million people died from TB.\(^1\) Globally in 2010, there were an estimated 350,000 deaths from TB among people who were HIV-positive. WHO, UNAIDS and the Stop TB Partnership have set a target that, by 2015, TB mortality rates among people who are HIV-positive should be reduced by 50% compared with 1990.\(^{ii,iii}\) In 2008 WHO issued *Policy Guidelines for Collaborative TB and HIV Services for Injecting and Other Drug Users: an Integrated Approach.* In 2012 WHO issued a new *Policy on Collaborative TB/HIV Activities: Guidelines for National Programmes and Other Stakeholders.*\(^{iv}\) These and a few other documents\(^{5,23,28}\) are the main sources of reference for TB and HIV treatment and prevention among PWUD; however, there is no up-to-date official and comprehensive guidance on the subject. This trainer’s manual compiles existing clinical and programmatic information about TB, HIV and drug use. It aims to present information in a way that is suitable for the community service providers and people without special clinical training, and guide them to a better TB response.

Basic information about TB

TB is an infectious disease caused by bacteria, *Mycobacterium tuberculosis (M. tuberculosis).* It multiplies at a very slow rate, survives for weeks in a dry state and needs a host organism to grow. *M. tuberculosis* primarily affects the lungs. The source of TB infection is people with active pulmonary TB disease affecting the lungs or larynx who have not been diagnosed and treated or have not received enough treatment to become non-infectious. Left untreated, each person with pulmonary TB will infect on average between 10 and 15 people per year.\(^{v,vii}\) Infectious particles are produced through coughing, sneezing, talking or singing. The risk of transmission depends on the length of exposure and the bacterial load – or the infectiousness – of a patient. The majority of people who are exposed do not become infected. People who have the TB infection but do not become sick have latent TB infection (LTBI). One third of the global population has been exposed to *M. tuberculosis*; however, only 10% of those infected will develop active TB disease.\(^{vii}\) The risk is highest in the first two to five years after the infection.

TB among people who use drugs

PWUD have a higher risk of TB infection and HIV infection as well as TB disease.\(^{viii}\) People living with HIV (PLHIV) who are infected with TB are about 21–34 times more likely to develop TB disease than those who are HIV-negative.\(^{ii}\) TB incidence has fallen or stabilized among PWID in many industrialized countries but not in Eastern Europe and countries of the former Soviet Union.\(^{ix}\) Especially in Eastern Europe, injecting drug use is an increasingly significant contributor to the spread of HIV, resulting from high prevalence of unsafe practices (using shared injecting equipment) among PWID.\(^{x}\) The routes of HIV transmission among non-injecting PWUD are much less clear than among PWID.\(^{xi}\)

- TB is a leading cause of mortality among PWID living with HIV.\(^{xii}\) Patterns of HIV transmission have been identified among people who smoke stimulant drugs, although not to the same extent as PWID.\(^{xi}\)
- There is no established link between the risk of TB disease and any particular drug; however, PWUD are often among the most vulnerable and socially excluded people and are, therefore,
exposed to many other risk factors for TB such as poverty, homelessness, overcrowding and imprisonment.

- PWID may also be more contagious because of advanced TB, unattended disease and higher rates of treatment failure. Untreated LTBI and untreated HIV infection amount to a high risk of TB disease of about 7% to 10% per year. Both all-cause and TB-associated mortality rates are several times higher among PWUD living with HIV than among other people living with HIV.

**Drug-resistant TB**

Drug resistance arises due to improper use of medication in treatment of drug-susceptible TB patients, whether due to incorrect combinations and dosage of drugs or to a failure to ensure to complete the course of treatment. Multidrug-resistant (MDR) TB shows resistance to at least two of the ‘first-line’ drugs: isoniazid and rifampin. MDR-TB can be successfully treated with ‘second-line’ drugs such as fluoroquinolones and injectable agents. Second-line drugs are more expensive, have more side effects than the first-line drugs and are not readily available in many countries of the world. Longer course of treatment may be required in case of MDR-TB.

Extensively drug-resistant tuberculosis (XDR) TB has resistance to the first-line and second-line drugs, i.e. MDR-TB plus resistance to a fluoroquinolone and at least one second-line injectable agent: amikacin, kanamycin and/or capreomycin.

The implications of MDR-TB at the individual level are longer treatment with a lower chance of success and more side effects. According to the WHO *Global TB Report 2011*, diagnosis and appropriate treatment of MDR-TB and XDR-TB remain major challenges.

MDR and XDR TB bacteria can be transmitted from one individual to another, and a newly infected person can have drug-resistant TB from the beginning, without previous exposure to TB medications. *The European Region has the highest prevalence of MDR-TB in the world.*

Emergence of TB drug resistance is particularly notable in countries with large populations of PWID. In addition, PWID have an increased risk of TB reactivation and increased risk of developing MDR-TB. To address the problem of drug-resistant TB, the ‘Consolidated Action Plan to Prevent and Combat Multidrug- and Extensively Drug-Resistant Tuberculosis in the WHO European Region 2011–2015’ was launched at the 61th session of the WHO Regional Committee in Baku, Azerbaijan, in 2011. The plan emphasizes rapid diagnosis, equitable access to treatment and care, a systems approach, involvement of civil society organizations (CSOs), social determinants, partnership, strong monitoring and reporting and new drug and diagnostics development.

**TB case-finding and diagnostics**

The most efficient method for preventing transmission of TB is by finding cases of TB early and providing accurate diagnosis and appropriate treatment to pulmonary TB patients.

For screening for active TB disease it is recommended to use the following four clinical symptoms: current cough, weight of loss, fever and night sweats to identify who may have active TB disease. Duration of cough is usually 2 – 3 weeks or more. Having had contact with a TB patient or having had TB in the past are the additional risk factors. Contacts of smear-positive TB patients are at high risk of being infected and of developing TB disease, justifying active case detection in these individuals.

The algorithms for assessing TB risk and disease in an HIV-positive and HIV-negative people are slightly different. Figure 1 below presents text and figure of the recommended clinical protocol for the HIV-positive person for WHO European region: management of tuberculosis and HIV coinfection.
In assessing HIV-infected persons for TB risk, particular attention should be paid to:

- respiratory symptoms;
- household contacts of anyone with an active case of pulmonary TB;
- coexisting risk factors and vulnerability-increasing factors (e.g., injecting drug use, alcohol abuse, and incarceration).

The initial assessment for TB should include:

- a history of TB exposure;
- a history of possibly related symptoms.

a) If an HIV-infected person does not have an obvious risk for TB (recent exposure or clinical symptoms), a TST should be performed to identify any latent TB infection. A positive TST is indicative of past or recent TB infection. A positive TST is not a condition for starting IPT.

b) If an HIV-infected person has been recently exposed to TB or has clinical symptoms indicative of pulmonary or extrapulmonary TB disease, the status of active TB disease should be explored. Active TB can be excluded through careful clinical examination, bacteriological investigation (sputum microscopy and culture) and x-ray. There is no chest radiographic pattern which is absolutely specific for pulmonary TB. It is not recommended to rely on chest radiography as the only diagnostic test for TB. Radiographic examination, however, is most useful when applied as part of a systematic approach to evaluate patients whose symptoms suggest TB but whose sputum smears are negative. In case of infiltrate in the chest x-ray, a clinical trial with a full course of broad-spectrum antibiotics may be necessary to make a diagnosis differentiating between TB and nonspecific pneumonia. When active TB disease is excluded, the possibility of latent TB infection should be explored through a tuberculin skin test.

c) If an HIV-infected person has active TB disease, he or she should be treated.

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**Figure 1. Algorithm for assessing TB risk and disease in an HIV-positive person. Source: Management of Tuberculosis and HIV Coinfection. Clinical Protocol for the WHO European Region.**

Methods, commonly used for diagnosing TB:

- **The tuberculin skin test (TST or often called Mantoux test)** is the standard method of determining whether a person is infected with *Mycobacterium tuberculosis*. The TST is performed by injecting 0.1 ml of tuberculin purified protein derivative (PPD) into the inner surface of the forearm.\(^{xviii}\) It has several limitations, including possibility of false-negative results. False-negative TST is more likely to occur among PWIDs because of higher rate of anergy (lack of reaction) that occurs most commonly in HIV-positive PWID, in late stages of HIV-disease. For this reason, the international guidelines recommend that less emphasis should be put on TST results in PLHIV, including PWUDs, in areas where HIV prevalence in this group is high, and more on potential exposure to TB together with signs and symptoms of the disease.\(^{xvii,xiv}\) For TST results to be read, patients must return to a medical care setting 48–72 hours after its placement. This requirement may serve as a barrier to test completion, particularly for people whose lives may be complicated by active drug use.\(^{xix}\)

- **Interferon-gamma release assays (IGRA)** are an alternative to TST, it is a blood test and can be accomplished after a single patient visit. Diagnosis of latent TB infection in PLHIV is complicated because of a reduced sensitivity of TB diagnostic tests, including TST and IGRA.\(^x\) Some studies may suggest increased sensitivity of IGRA among drug users.\(^{xx}\) The method used depends on national guidelines and availability of resources.

- **Xpert MTB/RIF assay** diagnoses TB in less than two hours and simultaneously detects drug resistance to rifampin. Currently the first tool recommended by WHO to be used as the initial diagnostic test for individuals suspected of having MDR-TB, for TB diagnosis among PLHIV or where there is a high risk of TB, e.g. among PWID.

- **Sputum smear microscopy** is the most common diagnostic tool worldwide. It is the most efficient method and is used to diagnose TB in people with suspected pulmonary TB. It is also used to monitor the progress of infectious patients during treatment, including confirmation of cure.\(^{xxi}\)

- **Sputum culture** involves growing live TB bacteria in laboratory conditions. Unlike smear microscopy, culture can monitor treatment response in case of smear-negative TB and can be used on samples from extrapulmonary TB (EPTB) focuses. This is important, as both smear-negative and EPTB are more common in people with HIV – particularly those with severe immune dysfunction. Culture also remains essential for susceptibility testing for drug resistance. Suspected drug-resistant cases should be confirmed by drug susceptibility testing (DST) whenever possible. Culture is more expensive and time consuming and requires more technologically advanced laboratory facilities. In high-HIV prevalence settings, where WHO-approved molecular tests are available (e.g. Xpert MTB/RIF assay), they should be the primary diagnostic test for TB in PLHIV.\(^{xxii}\)

- **Chest radiography** is useful for differential diagnosis of pulmonary disease among patients with negative sputum smears. Chest radiography is needed for people who are suspected of having TB, are sputum-smear-negative and do not respond to a course of broad-spectrum antibiotics. Bronchitis and pneumonia with *Streptococcus pneumoniae, Haemophilus influenzae* and other common pathogens are frequent in PLHIV. No radiographic pattern is specific to TB, although the classical hallmarks of the disease are cavitation, apical distribution, pulmonary fibrosis, shrinkage and calcification. HIV-positive patients with relatively well-preserved immune function will often show these typical features.\(^{xxiii}\)

The clinical pictures, sputum smear results and chest x-rays are often different in the early and late stages of HIV infection. The clinical presentation of TB cases in early HIV infection is similar to that of individuals without HIV infection, with positive sputum smears and often with cavities in the chest x-ray. In contrast, in late HIV cases the sputum smear is often negative, and radiological infiltrates are present instead of cavities.\(^{xiv}\) Therefore, in late stages of HIV, which may be observed in PWUD, sputum smear
becomes increasingly insensitive.\textsuperscript{xv} Xpert MTB/RIF assay has proved to be more effective at diagnosing smear-negative TB.

In addition, EPTB in HIV-positive PWUD is notoriously difficult to diagnose. In 15–20\% of active TB cases the bacteria spread through blood or lymph and affect other parts of the body outside the respiratory organs, such as peripheral lymph nodes, the kidneys and the brain, and produce extrapulmonary forms of TB.\textsuperscript{xxiv} In case of severe immunodeficiency, the rate of EPTB increases in both adults and children.\textsuperscript{xiv} EPTB is associated with poor treatment outcomes and excessive early mortality. If available, culture should be used for EPTB easily accessible for sampling, e.g. glandular TB. In HIV-positive patients particularly, this would greatly reduce diagnostic and treatment error. TB laboratory diagnostic tests are outmoded and cumbersome, and their availability is limited worldwide, which adversely affects vulnerable populations such as PWID. Even when available, current TB culture and DST can take weeks to months. Thus, TB diagnosis among PWID with and without HIV infection is often not confirmed or is delayed, leading to high rates of morbidity and mortality and ongoing transmission in congregate and public settings.\textsuperscript{xxv} PWUD with symptoms of TB disease or a positive TST or IGRA result should be medically evaluated for TB disease. In PWUD, after the consideration of medical history and clinical symptoms, TB is further diagnosed by Xpert MTB/RIF assay, sputum smear microscopy, culture and chest x-ray.xxv

A summary of the different tests can be found in Table 1.

\textit{Table 1. Tests for tuberculosis} \textsuperscript{xxvi}

<table>
<thead>
<tr>
<th>Test name</th>
<th>Advantages</th>
<th>Disadvantages/Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>TST</td>
<td>Indicative of LTBI</td>
<td>Has poor specificity because of cross-reactivity with the antigens of the Bacille Calmette Guerin (BCG) vaccine, as well as many of the nontuberculous mycobacteria. False-negative results due to energy in PLHV (especially with low CD4 count).</td>
</tr>
<tr>
<td>IGRA test</td>
<td>Indicative of LTBI, can be accomplished after a single patient visit</td>
<td>Potential for false-positive tests due to cross-reactivity is significantly lower with IGRAs than with the TST. Is more likely than traditional TST to diagnose LTBI in PWID; more expensive than TST.</td>
</tr>
<tr>
<td>Chest x-ray</td>
<td>Important adjunct to the diagnosis of smear-negative pulmonary TB in PLHV</td>
<td>HIV infection diminishes the reliability of chest radiographs for the diagnosis of pulmonary TB because the disease commonly presents with an atypical pattern. Chest radiograph may be normal in a proportion of HIV-positive patients with sputum-culture-positive TB (observed in up to 14% of such cases).</td>
</tr>
<tr>
<td>Sputum smear microscopy</td>
<td>In nearly all clinical circumstances in settings of high TB prevalence, identification of AFB\textsuperscript{1} by microscopic examination is highly specific for the \textit{M. tuberculosis}.</td>
<td>Direct smear microscopy is relatively insensitive as at least 5000 bacilli per millilitre of sputum are required for direct microscopy to be positive. Smear sensitivity is reduced in patients with extrapulmonary TB, those with HIV co-infection and those with disease due to nontuberculous mycobacteria. Microscopy for AFB cannot distinguish \textit{M. tuberculosis} from other AFB, nor viable from non-viable organisms, nor drug-susceptible from drug-resistant strains.</td>
</tr>
<tr>
<td>Sputum culture</td>
<td>Provides a definitive diagnosis of TB; can detect cases earlier (often before they become infectious). Culture also provides the necessary isolates for DST.</td>
<td>Much more complex and expensive than microscopy to perform</td>
</tr>
<tr>
<td>DST</td>
<td>Provides a definitive diagnosis of drug-resistant TB.</td>
<td>Suitable for use at central/national reference laboratory level only, given the need for appropriate laboratory infrastructure and the technical complexity of available technologies and methods</td>
</tr>
<tr>
<td>Molecular testing: line probe assay (LPA)</td>
<td>Rapidly identifies MDR-TB or HIV-associated TB; standardized testing, potential for high throughput, and reduced biosafety needs</td>
<td>Does not eliminate the need for conventional culture and DST capability; currently available LPAs are registered for use only on smear-positive sputum specimens \textit{M. tuberculosis} isolates grown from smear-negative specimens by conventional culture methods. LPAs are suitable for implementation at central/national reference laboratory level, with potential for decentralization to regional level if appropriate infrastructure can be ensured.</td>
</tr>
<tr>
<td>Molecular testing: Xpert MTB/RIF assay</td>
<td>Detects both TB and rifampicin resistance in a single test. Rifampicin resistance is a good and reliable proxy for MDR-TB in high-burden settings.</td>
<td>Does not eliminate the need for conventional culture and DST capability; requires uninterrupted and stable electrical power supply and yearly calibration of the cartridge modules. The positive predictive value of Xpert MTB/RIF is low in settings where rifampicin resistance is rare, and results need</td>
</tr>
</tbody>
</table>

\textsuperscript{1} Bacteria resistant to decolourization by acids during staining procedures used in microscopy.
TB treatment
Interventions to reduce the burden of TB among PLHIV include the early provision of antiretroviral therapy (ART) for PLHIV in line with WHO guidelines and the Three I’s for HIV/TB. ART should be given to all HIV-positive TB patients as soon as possible within the first eight weeks of commencing anti-TB treatment, regardless of their CD4 cell counts. Those HIV-positive TB patients with profound immunosuppression (e.g. CD4 counts of less than 50 cells/mm³) should receive ART immediately within the first two weeks of initiating TB treatment. TB patients, their family and community members should be provided with HIV prevention services. The global coverage of ART for TB patients living with HIV remains low (only 46%), despite the large increase in HIV testing among TB patients and the WHO recommendation that ART should be provided to all TB patients living with HIV regardless of their CD4 cell count. The provision of ART to TB patients living with HIV must be enhanced, including the use of TB services and infrastructure to allow decentralization of care delivery according to national guidelines and the local context.

The Three I’s for HIV/TB are:
- intensified TB case-finding (ICF) followed by high-quality anti-TB treatment;
- isoniazid preventive therapy (IPT); and
- infection control for TB (TB-IC).

ICF includes asking a series of symptom screening questions at every visit, conducting an appropriate diagnostic evaluation for anyone with a positive symptom screen, and performing TB screening for household contacts of all index patients. IPT can prevent active TB disease. TST is used in high-risk populations to identify individuals eligible for IPT. All adults and adolescents living with HIV with unknown or positive TST for whom active TB is ruled out should receive at least six months of IPT as part of a comprehensive package of HIV care to reduce risk of developing TB disease. IPT for PWUD should be dispensed with other treatments, such as OST, in settings where this is implemented.

In terms of TB-IC, managerial direction at national and sub-national levels is needed to implement administrative, environmental and personal protective measures against TB infection in health care facilities and congregate settings. These measures should include surveillance of HIV and TB among health care workers and relocation of health workers living with HIV from areas with high TB exposure, in addition to providing ART and IPT.

TB control strategy
The aim of TB control programs is to identify and cure all patients in whom TB has been confirmed by demonstration of acid fast bacilli by microscopy and isolation of *M. tuberculosis* in culture or diagnosed by a clinician. Sputum smear microscopy, culture and chest X-ray should be used in all European countries for PWUDs with symptoms or signs of TB disease. An internationally recommended TB control strategy, named DOTS was launched in 1994. Its important component is Directly Observed Treatment (DOT) for TB, which means that a trained health care worker or other designated individual watches the patient swallow every dose of the prescribed TB drugs. DOT helps ensure that the patient takes the right drugs at the right time for the full duration of treatment. The DOTS strategy includes political commitment, diagnosis by quality-assured sputum smear microscopy, standardized short-course anti-TB treatment under direct observation, uninterrupted supply of quality-assured anti-TB drugs, and standardized recording and reporting.
DOTS remains the cornerstone of the Stop TB Strategy launched by WHO in 2006. A fundamental change between the DOTS strategy and the Stop TB Strategy is the enhancement of the concept of patient-centred care for all individuals with TB. The Stop TB Strategy has six components:

- pursue high-quality DOTS expansion and enhancement;
- address TB/HIV and MDR-TB and other special challenges;
- contribute to health system strengthening;
- engage all care providers;
- empower people with TB and communities; and
- enable and promote research.

TB treatment requires full adherence, preferably under direct observation and patient support and should follow internationally recommended standards. TB treatment regimens consist of two phases: an initial phase and a continuation phase. The standard TB regimen worldwide includes a two-month intensive phase of typically four first-line drugs: isoniazid, rifampin or rifampicin, ethambutol, pyrazinamide and/or streptomycin. During the continuation phase only isoniazid and rifampicin are given daily for four months. The clinical management of TB/HIV in PWID is challenging and requires more effort. TB treatment can have hepatotoxic side effects, particularly in individuals receiving ART, co-infected with hepatitis B or C (HBV/HCV) or with heavy alcohol use. Isoniazid, rifampicin and pyrazinamide are all associated with drug-induced hepatitis. Pyrazinamide is the most hepatotoxic, followed by rifampicin. Rifampicin is less likely to cause hepatocellular damage, although it is associated with cholestatic jaundice. Patients with liver disease should not receive pyrazinamide.

This is further complicated by issues of drug interaction, e.g. for individuals taking methadone its dosage must be increased as rifampicin increases clearance of methadone and some antiretrovirals. Rifabutin is the preferred alternative for the treatment of TB disease among patients on highly active antiretroviral therapy (HAART), as it causes fewer unwanted drug-drug interactions. Other factors that complicate TB/HIV treatment in PWUDs include lower adherence levels (due to dramatically increased pill burden, prominent side effects and other factors, whereas adherence is vital to prevent the development of resistance of bacteria to available medications), and lack of access to the health care system in general.

TB is a curable disease - in favorable conditions drug-susceptible TB has very high cure rates, close to 100%. For the MDR-TB this figure is 70-90% in the best health systems, and drop to 30% for XDR-TB patients who are HIV-negative. Treatment for MDR-TB should last at least 20 months and requires second-line drugs to be taken daily, sometimes twice a day. Much more data are needed to better understand dosing for the drugs used for drug-resistant TB, their safety and toxicity, and drug-to-drug interactions; there is little to no data regarding these drugs and OST.

Access to treatment
HIV programmes and TB control programmes should collaborate with harm reduction services to ensure universal access to comprehensive TB and HIV prevention, diagnosis, treatment and care as well as drug treatment services, including OST, for PWUDs in a holistic person-centred approach to maximize access and adherence within one setting. A good example of such programme implementation is described in a case study which is part of an article by Grenfell et al., A rapid assessment of the accessibility and integration of TB, HIV and harm reduction services for people who inject drugs in Portugal. Two approaches to deal with poor ART and TB treatment adherence rates among PWID not receiving OST were developed:

- One is based on the Combined Therapy Centres (CTC) which are units providing TB prevention, diagnostic and treatment services. At CTCs dramatic improvements in adherence and health outcomes among programme participants have been observed. CTCs rely on onsite multidisciplinary teams and established combined care protocols, which enable treatment to be integrated from the outset, in one setting.
• The second approach to facilitate treatment delivery in one location is through collaboration between vertical treatment programmes, outreach teams, sheltered housing, service users and, in some cases, pharmacies. This model is represented by Pulmonary Diagnostic Centres (PDCs) through the involvement of outreach teams, involving less bureaucracy, timely access and the opportunity to receive treatment at or near one’s home. PDCs offer combined, individually tailored treatment in a variety of community-based settings via outreach teams or at home. Improvements in adherence rates and treatment outcomes have been observed in PDCs as well as in CDTs. According to the study, the clients’ preference for either CTC or PDC depended largely on proximity of the treatment services and preference for either health-centre-based or community/home-based care. xxxv

Collaboration between TB, HIV and harm reduction programmes is essential in organizing effective outreach services such as education, screening, TB preventive treatment, DOT for TB and the tracing of treatment defaulters xxxii to improve preventive measures and treatment outcomes of PWUD, thereby saving lives, protecting communities and contributing positively to public health.

A special approach for people who use drugs
PWUD needs for special approaches in terms of screening and identification of LTBI or active TB disease, assistance with treatment adherence and prevention of TB infection are rarely addressed in Eastern Europe and Central Asia (EECA countries).

• Commonly-used in EECA diagnostic and treatment approaches are not always suitable for PWUD. Access to diagnostic services is more difficult for PWUD because of stigmatization and a lack of patient-centred services.
• TST requires a repeat visit to the health care facility, which is not always feasible for PWUD.
• Staff at health care facilities is not always trained in terms of communication skills and clinical knowledge to work with PWUD.
• Sometimes, in some countries, clients have to pay to be diagnosed and/or treated.
• TB treatment, HIV treatment and substitution therapy are usually not available in one physical location.
• During TB treatment, hospitalization for at least two months is a normal practice in many countries of the EECA region. In the absence of side effects that require hospitalization, this practice could be avoided and replaced by community outreach services to provide DOT and increase adherence among PWUD.xxxvi
• The situation is further complicated by a lack of information about TB among PWUD, stigmatization of PWUD diagnosed with TB and the fact that covering PWUD by regular surveillance and prevention activities requires extra effort on the part of medical service providers.

A number of activities can be implemented by the affected communities, including but not limited to PWUD, their families and CBOs/NGOs, with the aim of improving the current situation. These activities can include:
• participation in situation assessment, project and programme implementation, monitoring and evaluation;
• peer counselling;
• community mobilization, information campaigns and advocacy. National advocacy efforts should focus on addressing local challenges and using the appropriate advocacy strategies, which can be identified during the situation assessment. National and regional advocacy can target the level of policymakers, service providers and/or the community. The focus of regional advocacy in EECA is usually on regional policy and legislation and improving networking and collaboration with regional stakeholders (the European Parliament, WHO, United Nations agencies and
international NGOs). The present training covers subjects related to situation assessment, advocacy planning, effective advocacy campaigns and partnership building.
PART I – TB LITERACY (by Nonna Turusbekova)

MODULE 1: WHAT ARE TB AND MULTIDRUG-RESISTANT TB?

Module Goal: This introductory module will provide an overview of TB infection and disease, ways of transmission and TB and multidrug-resistant (MDR-) TB risk factors in relation to drug use and other infections.

Learning Objectives: By the end of the module, participants will be able to:
- describe the difference between TB infection and disease;
- explain what causes TB and how it is transmitted;
- discuss TB and MDR-TB in relation to drug use and the risk factors; and
- list interactions between TB and HIV (‘mutual support’).

Topics covered:
- Latent TB infection (LTBI) and disease
- Transmission and risk factors (with a practical exercise)
- MDR-TB
- TB and HIV, TB and drug use.

Materials and resources required:
- Computer/laptop
- Flipchart paper, stand and markers

Module time: approximately 100 minutes

Show and talk to Slide 1.1 (Module 1: What are TB and MDR-TB?) outlining the module:
TOPIC 1: LATENT TB INFECTION AND DISEASE

Activity: Lecture presentation, group discussion
Section Time: Approximately 40 minutes

The purpose of this section is to give participants a basic understanding of what TB and MDR-TB are, how TB is transmitted and the differences between LTBI and TB disease.

Show Slide 1.2 (Group Work) and ask participants to work in pairs and thereafter share with the group:

- Please share with your neighbour what you know about TB

To facilitate the discussion:
- let participants work in pairs and share what they know about TB;
- ask if someone they knew had TB, how they found out about it, if they received treatment;
- after 3–5 minutes ask participants to share what they discussed in pairs; and
- note participants’ answers in the form of key words on the flipchart.

Show and talk to Slide 1.3 (What is TB?) and 1.4 (Tuberculosis infection and disease):

**What is TB?**

TB is an airborne infectious disease, caused by special bacteria, named *Mycobacterium tuberculosis*.

- Once inhaled, bacteria travel to lungs and establish infection
- Most people, once infected, will not show any symptoms and will not develop the disease

**Tuberculosis: Infection and Disease**

- No infection
- Contact with infectious case
- Infection
- Disease

- No disease (90%)
- Early (5%) (<3 years)
- Late (5%)

Supporting content:

TB is transmitted through the air (airborne infection). Once inhaled *Mycobacterium tuberculosis* (M. *tuberculosis*) travel to lungs and establish infection. Between two and 12 weeks after infection, an immune response limits additional multiplication of the bacilli. At this point infection is detectable in the form of a positive tuberculin skin test (TST). Tuberculin contains bacterial proteins. A person who has
been exposed to the bacteria is expected to mount an immune response. Most people who have been infected with TB will not show symptoms and will not develop TB disease. Around 10% of those infected will develop TB at some point in their lives, e.g. if their immune system becomes weakened due to ageing, malnutrition, other illnesses or the use of immunosuppressive medications. The risk is highest in the first two to five years after infection. Incidence of TB among TB-infected HIV-positive people is much higher than among HIV-negative persons. (Source: WHO TB-IC generic lectures 2009.)

Show and talk to Slide 1.5 (The Global TB Situation in 2010):

**The Global TB Situation in 2010**

- **All forms of TB**: 8.8 million (8.5–9.2 million) cases, 1.4 million deaths
- **HIV-associated TB**: 1.1 million (1.0–1.2 million) cases
- **Multidrug-resistant TB**: ~650,000 (11–14 million) prevalent TB cases

* Including deaths attributed to HIV/TB

**Supporting content:**

*M. tuberculosis* infection is present in an estimated one-third of the world’s population or roughly 2 billion people. Worldwide, TB is the second most significant communicable disease after HIV/AIDS in causing death. According to WHO, in 2010, 8.8 million people fell ill with TB and 1.4 million died from TB, including an estimated 350,000 among people who were HIV-positive.

Show and talk to Slide 1.6 (Latent TB Infection vs TB Disease) to explain the difference between LTBI and TB disease:

**Latent TB Infection vs TB Disease**

- **LTBI**
  - TB bacteria not replicating
  - Well
  - Chest x-ray usually normal
  - Negative bacteriology
  - Not infectious
  - Needs treatment for LTBI to prevent TB disease
  - Skin or blood test result usually positive

- **TB Disease**
  - TB bacteria replicating
  - Sick
  - Chest x-ray usually abnormal*
  - Positive smear, culture*
  - May be infectious
  - Needs treatment to treat active TB disease
  - Skin or blood test result usually positive*

* May not be true in patients with extrapulmonary TB and/or compromised immune systems

**Supporting content:**

This slide shows the difference between LTBI and TB disease. Approximately two to eight weeks after lungs are infected with *M. tuberculosis*, the immune system springs into action. Macrophages — specialized white blood cells that ingest harmful organisms — begin to surround and ‘wall off’ the tuberculosis bacteria in the lungs, much like a scab forming over a wound. If the macrophages are successful, the bacteria may remain within these walls for years — alive, but in a dormant state. The
individual has no signs or symptoms of TB and feels well. Chest radiography (chest x-ray, CXR) is normal, and bacteriological examinations such as smear and culture are negative. People with LTBI usually have a positive TST using purified protein derivative (PPD). People with LTBI cannot transmit TB to others; they are not infectious. Certain groups of people who are at increased risk of developing TB disease, such as PLHIV, may require treatment for LTBI to prevent TB disease. If they have been exposed to and infected by a person with MDR- or extensively drug-resistant (XDR-) TB, preventive treatment may not be an option.

When TB disease develops, the situation is different, as described in the right-hand column of the table. The TB bacilli are replicating, and the patient usually feels sick. If the site of TB is the lungs, the patient will have an abnormal CXR and often positive sputum smears or cultures. The TST is usually positive. Patients with TB of the lungs are likely to spread TB to others. Cases of TB disease must be notified to the TB programme. If they have been exposed to and infected by a person with MDR or XDR-TB, patients will require treatment on average for two years with second-line drugs. (Source: WHO TB-IC generic lectures 2009.)

**TOPIC 2: TB TRANSMISSION AND RISK FACTORS**

**Activity:** Lecture presentation, group discussions  
**Section Time:** Approximately 40 minutes  
**Materials:** Tags ‘Agree strongly’, ‘Agree’, ‘Disagree’, ‘Disagree strongly’ to be placed in different corners of the room.

*Show and talk to Slide 1.7 (TB Transmission)* to explain that TB is an airborne infection:

**Supporting content:**
The source of TB infection is people with active pulmonary TB disease affecting the lungs or larynx who have not been diagnosed and treated or have not received enough treatment to become non-infectious. Left untreated, each person with pulmonary TB will infect on average between 10 and 15 people per year. TB is spread through the air from person to person, through tiny water particles, which can remain in the air for several hours, depending on the environment. Tiny particles containing *M. tuberculosis* may be expelled into the air when a person with infectious TB of the lungs, airway or larynx coughs, sneezes, speaks, shouts or sings. (Source including the image: CDC TB 101 for Health Care Workers.)
Show Slide 1.8 (4 Corners Exercise) and introduce the ‘4 Corners Exercise’ about the common misconceptions about TB:

4 Corners Exercise

1. Sharing utensils spreads TB
2. Washing hands regularly will prevent TB transmission
3. TB spreads through clothes or bedding
4. TB spreads through direct contact (e.g. hand shake)
5. TB spreads through dust is false
6. TB is inherited
7. TB spreads through food items (except unpasteurized milk)

To facilitate the exercise: Introduce statements one by one (they appear after mouse-click) and ask participants to stand in the corner which corresponds to what they think is the correct answer. Give some time for discussion, then provide and explain the correct answers. Total time for this exercise is 20 minutes.

- The belief that sharing utensils spreads TB is false.
- The belief that washing hands regularly will prevent TB transmission is false.
- The belief that TB spreads through clothes or bedding is false.
- The belief that TB spreads through direct contact (e.g. hand shake) is false.
- The belief that TB spreads through dust is false.
- The belief that TB is inherited is false.
- The belief that TB spreads through food items (except unpasteurized milk) is false.

Supporting content:
Mycobacterium bovis is a bacterium which can cause TB in cattle (known as bovine TB). M. bovis is related to M. tuberculosis and can also cause TB in humans if transmitted via infected milk, although it can also spread via aerosol droplets. Actual infections in humans are rare, mostly due to pasteurization killing any bacteria in infected milk.

Show and talk to Slide 1.9 (TB Stages and Risk Factors): explain that this part of the lecture will focus on the risk factors for exposure and risk factors for TB infection.

TB Stages and Risk Factors

1. Infectious cases of TB in the community
2. Exposure time, proximity and concentration
3. Endogenous factors, such as HIV
4. Severity of disease, delay in diagnosis, age

Exposure  →  TB Infection  →  TB disease  →  Death
**Supporting content:**
Risk is the probability that an event will occur, e.g. that an individual will become infected or ill or die of TB within a stated period of time or age. This is a simple model to illustrate what can happen when an infectious case of TB exposes others. The stages (steps in the pathogenesis) of TB are in boxes: exposure, infection, disease, and death. The exposed individual can become infected, develop TB disease and, unfortunately, can also die because of TB. Risk factors (indicated by coloured ovals) are responsible for progression from one stage to the next. There are certain risk factors associated with exposure (oval 1), TB infection (oval 2) and risk factors for people with TB infection progressing to TB disease (oval 3).
(Source: WHO TB-IC generic lectures 2009, adapted from Union materials developed by Hans L. Rieder.)

*Show and talk to Slide 1.10 (Risk Factors for TB Exposure):*

<table>
<thead>
<tr>
<th>Risk Factors for TB Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>– Number of incident cases</td>
</tr>
<tr>
<td>– Duration of infectiousness</td>
</tr>
<tr>
<td>– Case-contact interactions per unit of time</td>
</tr>
<tr>
<td>• population density</td>
</tr>
<tr>
<td>• family size</td>
</tr>
<tr>
<td>• climatic conditions</td>
</tr>
<tr>
<td>• age of sources of infection</td>
</tr>
<tr>
<td>• gender</td>
</tr>
</tbody>
</table>

**Supporting content:**
Exposure is first of all determined by the number of active pulmonary TB cases in the community: the more cases, the higher the risk of being exposed. Another factor is the infectiousness of the person with TB: the undiagnosed or untreated are likely to infect more people around them. The duration of interactions between a person with TB and people who do not (yet) have TB depends on a number of factors. For instance, in congregate settings, such as homeless shelters or prisons, the risk of exposure is higher, and the duration of interaction may be several hours at a time. Polyclinics and hospitals are other examples of congregate settings where nosocomial TB transmission can take place, and the risk of health care workers being infected with TB is many times higher than in the general community. In cold climates exposure is higher because people spend more time indoors, and if there is an index case, e.g. in a large family, the exposure of more family members to *M. tuberculosis* is higher compared to a small family living in a warm climate where there are more possibilities to spend time outside or in well-ventilated areas to reduce exposure. Age and gender also play a role as risk factors and are often culturally specific. In many cultures younger people have more social contacts, more active social lives and visit places where many people gather (bars, discos) and are at a higher risk of TB infection in high-incidence countries than, for example, older people who have fewer social contacts and do not often visit places where transmission may take place. In certain countries and cultures it is harder for women to visit health care facilities, and they have to care for the sick. They may also have fewer social contacts outside the family. These are all factors which determine the probability of TB exposure.
Show Slide 1.11 (Group Discussion: Risk Factors for TB Exposure among PWUD):

**Group Discussion**

- Discuss the risks of exposure among people who use drugs

To facilitate the discussion: Lead a group discussion of approximately 10 minutes about risk factors for TB exposure among PWUD. A possible additional risk factor which PWUD can experience is incarceration (congregate setting), where TB incidence is high. Note participants’ answers in the form of key words on the flipchart.

Show and talk to Slide 1.12 (In Eastern Europe):

**In Eastern Europe**

- injection drug use => spread of HIV
- TB => leading cause of mortality among PWID living with HIV

Supporting content:
PWUD have a higher risk and incidence of both TB and HIV infection. Studies from the pre-HIV era showed that drug use is associated with increased rates of TB disease and infection. There were studies in New York City in the early 1970s which already showed TB risk among PWUD more than 10 times higher than those in the general population. Recent studies also show that there is an increased risk of TB infection and disease among PWUD regardless of HIV. One of the studies from Iran particularly reported the diagnosis of active TB disease in more than 6% of heroin and opium users.

HIV is the strongest risk factor promoting TB disease in people with TB infection. The relative risk of TB disease among TB-infected people with AIDS and PLHIV, compared to the general population, is 170% and 40–50%, respectively.

TB is a leading cause of mortality among PWID living with HIV, and in Eastern Europe injecting drug use is an increasingly significant contributor to the spread of HIV, resulting from unsafe practices such as using shared injecting equipment. The routes of HIV transmission with people who use stimulant drugs are much less clear than with injecting drug use. A study in Amsterdam showed that HIV infection increased
the risk of active TB in drug users 13-fold. The incidence of TB in HIV-negative PWUD was still six times higher than in the overall population of Amsterdam. TB incidence has fallen or stabilized among PWID in many industrialized countries but not in Eastern Europe and countries of the former Soviet Union.

**TOPIC 3: MULTIDRUG-RESISTANT TB**

*Activity*: Lecture presentation  
*Section Time*: Approximately 10 minutes

*To facilitate the presentation*: Do not repeat the factors that have already been mentioned by the participants, unless you give extra information about them.

*Show and talk to Slide 1.13 (MDR-TB and XDR-TB):*

**MDR-TB and XDR-TB**

Multidrug-resistant TB (MDR-TB) is resistant to at least isoniazid and rifampicin, the two most powerful TB medications.

**X**tensively drug-resistant TB (XDR-TB) is MDR-TB with additional resistance to an injectable agent and a fluoroquinolone.

**Supporting content:**

People often stop taking antibiotics before the end of their course because they begin to feel better. This can mean that the treatment has killed off most of the bacteria, leaving too few to cause symptoms. The remaining bacteria might contain some strains that have developed resistance to the drugs used. These drug-resistant strains can then multiply and begin to make these people sick again. This time, however, the treatments that were used the first time may not work because the new population of bacteria may become resistant to them.

Drug use, generally, is associated with special needs which, if not addressed in time, may result in lower rates of completing TB treatment (which is a major risk for developing resistance). PWUD are also more likely to be exposed to MDR-TB in places of detention, where MDR-TB rates are often higher. Examples of interventions will be presented and discussed later in the training.

**MDR-TB** refers to TB that is resistant (or not susceptible) to two first-line TB medications, isoniazid and rifampicin. More about first-line and second-line drugs will be covered in the next module.

**XDR-TB** refers to TB that is resistant (or not susceptible) to isoniazid and rifampicin as well as any of the fluoroquinolones (considered second-line treatment) and any of the second-line injectables (amikacin, kanamycin and capreomycin).

**Monoresistant TB** refers to TB that is resistant to only one TB drug.

**Polyresistant TB** refers to TB that is resistant to two or more TB drugs, but not necessarily isoniazid and rifampin. *(Source: TAG online toolkit.)*
**TOPIC 4: INTERACTIONS BETWEEN TB AND HIV**

**Activity:** Lecture presentation

**Section Time:** Approximately 20 minutes

*Show and talk to Slide 1.14 (Incidence of TB Disease among TB-infected People HIV (+) vs HIV (-)):*

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**Incidence of TB Disease among TB-infected People HIV (+) vs HIV (-):**

- **HIV (+):**
  - 7–10% every year
  - >30% lifetime

- **HIV (-):**
  - 5% first 2 years
  - <10% lifetime

---

**Supporting content:**

HIV promotes the progression of infection with *Mycobacterium tuberculosis* to active TB, both in people with recently acquired infections and those with latent infections. Undeniably, HIV is the most powerful risk factor known for activation of latent *M. tuberculosis* infection. For an HIV-infected person coinfected with *M. tuberculosis*, the risk of developing active TB reaches 5–10% annually, instead of the 5–10% lifetime risk for an individual not infected with HIV.

HIV fuels the TB epidemic by promoting progression from TB infection to active TB. As a result, the extra cases generated increase TB transmission in the community.

(Source: Management of Tuberculosis and HIV coinfection. Clinical protocol for the WHO European region.)

*Show and explain Slide 1.15 (TB Natural History) (Source: WHO TB-IC generic lectures 2009):*

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**TB Natural History**

- **M. tuberculosis**
  - First Infection
  - Primary TB
  - Latent infection
  - Reactivation (endogenous)
  - Re-infection (exogenous)
  - Progressive primary TB
  - Post-primary TB

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**Supporting content:**

There are three mechanisms leading to TB disease:
- the progression of primary infection to disease;
endogenous reactivation of the previously dormant bacilli, often due to a decreased immunity; and
exogenous re-infection (when more bacilli are inhaled from a source case).

Show and explain Slide 1.16 (HIV Influences TB Natural History) (Source: WHO TB-IC generic lectures 2009):

Supporting content:
HIV influences the TB natural history, as illustrated by the red arrows. HIV increases the risk of progression from infection to disease, whether it is the first infection, reactivation of a remote, latent infection, or exogenous exposure and re-infection.

Show and explain Slide 1.17 (Summary: Learning Points):

Summary: Learning Points
- LTBI is not the same as TB disease.
- TB is caused by *M. tuberculosis* and is transmitted through the air.
- The rate of TB and MDR-TB is much higher in PWUD often due to HIV co-infection and special needs regarding TB treatment adherence; additional risk factors include homelessness, imprisonment and poverty.
- TB and HIV ‘mutually support’ each other: TB is the main opportunistic disease in PLHIV, and HIV increases the risk of progression from TB infection to disease.

To facilitate the presentation: Ask the participants if there are any questions or comments at the end of Module 1.

End of Module 1
MODULE 2: TB TESTING AND DIAGNOSTICS

Module Goal: This module will provide an overview of TB (mono- and co-infection) symptoms, different methods of LTBI testing and TB active disease diagnosis, intensified case-finding.

Learning Objectives: By the end of the module, participants will be able to:
- describe the main symptoms of TB disease;
- discuss the methods for TB testing and diagnosis and their specifics and applicability to PWUD in resource-limited settings;
- define the main strategies to intensify case-finding: contract tracing and regular screening; and
- explain the diagnostic criteria and rationale for them.

Topics covered:
- Symptoms of TB
- TB testing and monitoring
- TB case-finding (with a practical exercise).

Materials and resources required:
- Computer/laptop
- Flipchart paper, stand and pencils
- Rooms for small-group work if available.

Module time: approximately 215 minutes.

Show and talk to Slide 2.1 (Module 2: TB Testing and Diagnostics) outlining the module:
TOPIC 1: SYMPTOMS OF TB

Activity: Lecture presentation and group work
Section Time: Approximately 10 minutes

Show and talk to Slide 2.2 (Symptoms of TB):

Symptoms of TB

- Cough > 2 weeks
- Low grade fever
- Weight loss
- Night sweats

PLHIV who report any one of the symptoms may have active TB and should be evaluated for TB and other diseases.

Supporting content:
In screening for active TB disease it is recommended to use the four clinical symptoms – current cough, weight loss, fever and night sweats – to identify someone who may have TB. PLHIV who report any one of the symptoms may have active TB and should be evaluated for TB and other diseases. The duration of a cough that should raise suspicion about TB is usually two to three weeks or more. It is specified in national guidelines, therefore may vary per country. Having had contact with a TB patient or having had TB in the past are additional risk factors. If someone has had contact with smear-positive TB patients it means they are at high risk of infection and of developing TB, justifying active case detection in these individuals.

Show and talk to Slide 2.3 (Algorithm for Assessing TB Risk and Disease in an HIV-positive Person) (Source: Management of Tuberculosis and HIV coinfection. Clinical protocol for the WHO European region):

Supporting content:
Early identification of signs and symptoms of TB followed by diagnosis and prompt initiation of treatment among PLHIV, their household contacts, groups at high risk for HIV and people living in congregate settings (e.g. prisons, workers’ hostels, police and military barracks) increases the chances of survival, improves quality of life and reduces transmission of TB in the clinic and the community. (Source: WHO policy on collaborative TB/HIV activities: guidelines for national programmes and other stakeholders, World Health Organization, 2012.)

Screening for TB is important regardless of whether PLHIV have received or are receiving isoniazid preventive therapy (IPT) or ART. When assessing PLHIV for TB risk, particular attention should be paid to:
- people with respiratory symptoms;
- household contacts of anyone with an active case of pulmonary TB; and
- coexisting risk factors and vulnerability-increasing factors (e.g. injecting drug use, alcohol abuse and incarceration).

IPT for LTBI may prevent active TB disease.

How frequently should PLHIV be screened for TB disease, using the four symptoms? At every visit to a health facility or contact with a health care worker, regardless of whether they have received IPT or ART. There are implications of frequent screening. A disadvantage is an increased workload for health care workers. The advantages are earlier detection of TB and reduced TB transmission.

**TOPIC 2: TB CASE-FINDING**

**Activity:** Group work  
**Section Time:** Approximately 100 minutes  

*Show and explain the group work Slide 2.4 (Small-Group Work – Screening for TB Disease: What can CSOs do?):* Introduce the exercise for group work of approximately 45 minutes.

*Small-Group Work (30 minutes)*

**Screening for TB Disease:**  
What can CSOs do?  
- Describe your target group  
- Identify strategy and concrete activities to find TB cases: screening and contact tracing  
- Identify a referral mechanism for TB suspects

*To facilitate the exercise:* Ask participants to break into small groups and discuss what civil society organizations (CSOs) can do to be involved and assist the national TB control and prevention programme in screening their target group for TB disease. Instruct the small groups to briefly describe their target groups and come up with concrete plans to:  
  - identify activities to find cases of TB disease, including contact tracing and screening; and  
  - identify a referral mechanism for TB suspects.
The group work is approximately 45 minutes. Thereafter the groups will present their strategy, activities and referral mechanism.

During the group presentations pay attention to and add where necessary such points as contact tracing, which among PWUD requires special approaches including outreach work and a client-centred approach. When discussing referral, ask how the CSOs will make sure that if a TB case is identified, the fact that the CSO referred the patient will be recorded accordingly, and discuss its importance.

**TOPIC 3: TARGETED TESTING AND DIAGNOSIS OF LTBI**

**Activity:** Lecture presentation and group work

**Section Time:** Approximately 65 minutes, including 45 for group work and presentations

*Show and read to* Slide 2.5 (Testing for TB Infection), Slide 2.6 (TST), Slide 2.7 (IGRA) and Slide 2.8 (Group Exercise):

**Testing for TB Infection**

Diagnostic tests that can be used to detect TB infection include:

- The Mantoux tuberculin skin test (TST)
- Interferon-gamma release assays (IGRAs)

**TST**

- The TST is used to determine if a person is infected with *M. tuberculosis*.
- Needs a second visit for result reading
- There is a chance of a false-negative TST, more likely to occur among PLHIV because of the high rate of anergy.

**QuantiFERON-TB Gold test- IGRA**

- Measures the patient’s immune system reaction to *M. tuberculosis*
- Not affected by prior Bacille Calmette-Guérin (BCG) vaccination
- Can be accomplished after a single patient visit
- A (more expensive) alternative to TST

**Group Exercise**

- In small groups, discuss the advantages and disadvantages of TST and IGRA.
- Select disadvantages which your SCO can address, and explain how.
- Present group work on a poster.

**Supporting content:**

PWUD are among the priority populations in which identification of LTBI is important to prevent TB disease. Patients with symptoms of TB disease may be given a Mantoux tuberculin skin test (TST) or a QuantiFERON®-TB Gold (QFT-G), a blood test referred to as an interferon-gamma release assay (IGRA), to help confirm infection with *M. tuberculosis*. Patients with symptoms of TB disease should always be evaluated for TB disease, regardless of their test results. TST and IGRA are used in the absence of symptoms of TB disease to diagnose LTBI. The method used depends on national guidelines.
TST is the standard method of determining whether a person is infected with *M. tuberculosis*. It is not a vaccine. Tuberculin is made from proteins derived from *M. tuberculosis* that have been killed by heating. The TST is performed by injecting 0.1 ml of tuberculin PPD into the inner surface of the forearm. In most settings, TST remains the mainstay of targeted testing, although new methods demonstrate promise for improving case-finding among high-risk populations. For TST, patients must return to a medical care setting to have the skin test read 48–72 hours after its placement. This requirement may act as a barrier to test completion, particularly for active PWUD. Compliance for a return read can be markedly improved with monetary incentives, whereas education and counselling are generally ineffective. Studies examining the validity of self-reported TST history and self-assessment of TST induration have yielded mixed results.

Another limitation of TST is that a false-negative result is more likely to occur among PWID because of the high rate of anergy (lack of reaction by the body’s defence mechanisms when they come into contact with foreign substances) that occurs in this population, most commonly found in HIV-positive PWID. For this reason, less emphasis should be put on TST results among PWID in areas where HIV prevalence in this group is high, and more on potential exposure to TB together with signs and symptoms of the disease. IGRA is an alternative to TST. IGRA can be accomplished after a single patient visit, and some studies may suggest increased sensitivity of IGRAs among PWUD, although further research and validation of the tests are needed. IGRA results are less subject than TST to reader bias and error and are not affected by prior Bacille Calmette-Guérin (BCG) vaccination. Another advantage of IGRA is the absence of boosting, an important consideration for individuals who undergo repeated testing.

Diagnosis of TB in PLHIV is complicated because of a reduced sensitivity of TB diagnostic tests, including TST and IGRA. A positive TST or IGRA result only indicates if someone has been infected with *M. tuberculosis*. These tests cannot identify if a person has TB disease. *(Source: Based on Deiss et al., 2009.)*

**To facilitate group work:** Divide the participants into four groups. Each group has 30 minutes to discuss the advantages and disadvantages of TST and IGRA and to develop ways of addressing certain disadvantages. The results have to be presented on a flipchart poster. The format of the presentation is as follows: groups post their flipcharts in one room, and the four groups are rearranged so that in each ‘new’ group there is at least one participant from each of the ‘old’ groups. The ‘new’ groups rotate from poster to poster in a ‘poster carousel’. One person from the group whose poster is being looked at presents the content of the poster. After five minutes groups rotate again. The total time for poster presentations by all groups is 20 minutes. The facilitator has to tell the groups when to rotate. At the end of the group work, the facilitator summarizes the results.
TOPIC 4: MEDICAL EVALUATION OF TB DISEASE

Activity: Lecture presentation
Section Time: Approximately 40 minutes

Show and read to Slide 2.9 (Medical Evaluation of TB Disease):

Medical Evaluation of TB Disease

1. Medical history
2. Physical examination
3. Test for TB infection (TST or IGRA)
4. Chest x-ray
5. Bacteriological examination

Supporting content:
Anyone with symptoms of TB disease or anyone who has a positive TST or IGRA result should be medically evaluated for TB disease. A medical evaluation generally consists of five parts:
1. Medical history
2. Physical examination
3. Test for TB infection (TST or IGRA) (already covered in this module)
4. Chest x-ray
5. Bacteriological examination.

Show and read to Slide 2.10 (Medical History):

Medical History

- Patient’s social, family, medical and occupational information
- Symptoms of TB disease
- Exposure to infectious TB or risk factors for exposure to TB
- Previously diagnosed LTBI or TB disease
- Any risk factors for developing TB disease (such as HIV and use of drugs)

Supporting content:
A medical history includes a patient’s social, family, medical and occupational information. Authorized persons with appropriate training, which can be doctors, nurses or NGO staff, should ask patients if they have:
• symptoms of TB disease (for example, unexplained weight loss, night sweats, loss of appetite, fever, fatigue, a cough lasting three or more weeks, or coughing up blood or sputum);
• been exposed to a person with infectious TB or have risk factors for exposure to TB;
• had LTBI or TB disease before (and, if so, whether they completed treatment); and
• any risk factors for developing TB disease.
TB disease should be suspected in patients with any of these factors.

Show and read to Slide 2.11 (Physical Examination):

**Physical Examination**
- Gives information about the patient’s overall health
- Helps to identify any factors that may affect how TB disease is treated if it is diagnosed.
- Followed by HIV testing and counselling, regularly offered to all patients

**Supporting content:**
2. Physical examination
This is an essential part. A physical examination cannot confirm or rule out TB disease, but it can provide valuable information about the patient’s overall health and help to identify any factors that may affect how TB disease is treated if it is diagnosed. Additionally, because HIV is the strongest known risk factor for progressing to TB disease, HIV testing and counselling should be regularly offered to all patients during a physical examination.

3. Testing for TB infection (previously covered)
Patients with symptoms of TB disease may be given a TST or an IGRA to help confirm infection with *M. tuberculosis*. However, these tests cannot confirm if a person has TB disease. Patients with symptoms of TB disease should always be evaluated for TB disease, regardless of their test results. Additionally, if a patient has symptoms of TB disease, clinicians should not wait for test results before starting other diagnostic tests.

Show and read to Slide 2.12 (Chest X-Ray) and 2.13 (Main sites of extrapulmonary tuberculosis):

**Chest X-Ray**
- Will usually appear abnormal if a patient has TB disease in the lungs
- Cannot confirm that a person has TB disease
- A variety of illnesses may produce abnormalities whose appearance on a chest x-ray resembles TB

The most common is TB of the lungs (pulmonary form), but it can affect any part of the body (extrapulmonary forms).
**Supporting content:**

4. Chest x-ray

A patient should have a chest x-ray if he or she has a positive IGRA or TST result or has signs and symptoms of TB disease. The chest x-ray will usually appear abnormal when a patient has TB disease in the lungs. It may show infiltrates or cavities. However, chest x-ray results cannot confirm that a person has TB disease. A variety of illnesses may produce abnormalities whose appearance on a chest x-ray resembles TB.

*Show and read to Slide 2.14 (Sputum Smear Microscopy) and Slide 2.15 (Sputum Culture):*

<table>
<thead>
<tr>
<th>Sputum Smear Microscopy</th>
<th>Sputum Culture</th>
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<tbody>
<tr>
<td>• The simplest laboratory test</td>
<td>• Live bacteria are grown in the laboratory</td>
</tr>
<tr>
<td>• Examination of sputum (from the lungs)</td>
<td>• Extremely sensitive</td>
</tr>
<tr>
<td>• Low cost</td>
<td>• Can detect extrapulmonary TB</td>
</tr>
<tr>
<td>• Quick results</td>
<td>• Used for drug sensitivity testing</td>
</tr>
</tbody>
</table>

5. Bacteriological examination

TB bacteriological examinations are done in a laboratory that identifies *M. tuberculosis* and other mycobacteria. Specimens are usually collected at a local health centre or clinic and sent to a laboratory to be examined.

A bacteriologic examination may include:
- specimen collection;
- examination of smears;
- direct identification of specimen (nucleic acid amplification);
- specimen culturing and identification; and
- drug susceptibility testing.

Sputum is a thick fluid produced in the lungs and in the airways leading to the lungs. A sample of sputum, collected from a person in whom TB is suspected, is placed in a container with substances that promote the growth of bacteria. If no bacteria grow, the culture is negative; if they do grow, the culture is positive. Sputum culture is still seen as the gold standard for active TB, as they are extremely sensitive if live mycobacteria can be obtained in the sample. *M. tuberculosis* can be cultured (grown) from a variety of specimens and can be used to detect pulmonary as well as extrapulmonary disease. By assessing the effect of antibiotics on the cultured bacteria (drug susceptibility testing), data on the likely effectiveness of certain antibiotics can be obtained.
Supporting content:
The new test, Xpert MTB/RIF assay, diagnoses TB in less than two hours and simultaneously detects drug resistance. Xpert MTB/RIF assay has proved to be more effective at diagnosing smear-negative TB, and WHO recommends that Xpert MTB/RIF be used as the initial diagnostic test for individuals suspected of having MDR-TB or HIV-associated TB.

The positive points of Xpert MTB/RIF assay are low bio-safety requirements, high sensitivity and specificity, speed (less than 2 hours), portability and ease of use. Low bio-safety requirements mean they are the same as for smear microscopy. There is no need for a bio-safety cabinet, and there should be a secure environment to ensure that the equipment is not damaged or stolen, and a stable electrical power supply. High sensitivity means that a high percentage of people with TB are correctly identified as having the disease. High specificity means that a high proportion of people who do not have TB are correctly identified as negatives. Negative points are the high running costs and infrastructure needs. The positive predictive value (PPV) of RIF resistance depends on the prevalence of RIF resistance, and, although RIF resistance is a very good indicator of multidrug-resistance, it does not automatically mean MDR-TB.

WHO recommends that Xpert MTB/RIF be used as the initial diagnostic test for individuals suspected of having MDR-TB or HIV-associated TB.

The clinical presentation, sputum smear results and chest x-rays are often different in the early stage of HIV infection (CD4 >350 cells/mm$^3$) and the late stage (CD4 <200 cells/mm$^3$). The clinical presentation of TB cases in early HIV infection is similar to that of individuals without HIV infection, resembling post-primary pulmonary TB; that is, with positive sputum smears (defined as two or more initial smear examinations that are positive for AFB, or one plus consistent radiographic abnormalities) and often with cavities in the chest x-ray. In contrast, the clinical presentation in late HIV cases resembles primary pulmonary TB: the sputum smear is often negative, and radiological infiltrates are present instead of cavities.

If an HIV-infected person does not have an obvious risk for TB (recent exposure or clinical symptoms), a TST should be performed to identify the status of any LTBI that may evolve into TB disease due to HIV-related immunosuppression. A positive TST is indicative of past or recent TB infection, which is a condition for starting TB preventive treatment (TPT). A negative TST in PLHIV usually means no risk of TB (except in those with severe immunosuppression). If an HIV-infected person has been recently exposed to TB or has clinical symptoms indicative of pulmonary or extrapulmonary TB disease, the status of active TB disease should be explored. Active TB can be excluded through careful clinical examination, bacteriological investigation (sputum microscopy and culture) and x-ray. In case of infiltrate in the chest x-ray, a clinical trial with a full course of broad-spectrum antibiotics may be necessary to make a diagnosis differentiating...
between TB and nonspecific pneumonia. When active TB disease is excluded, the possibility of LTBI should be explored through a TST. (Source: Management of Tuberculosis and HIV coinfection. Clinical protocol for the WHO European region.)

Show Slide 2.18 (Discussion of Best Practices):

Discussion of Best Practices

In Rotterdam, the Netherlands, establishment of a mobile unit providing chest radiographs for PWUD and homeless people contributed to a 50% decline in TB incidence in this group.

Question to the group:
Are there any examples in your countries?

To facilitate the discussion: Invite participants to share examples of LTBI testing and TB diagnosis in their countries. Allocate 10–15 minutes for the discussion.

Show and read to Slide 2.19 (Summary: Learning Points):

Summary: Learning Points

• There are four main symptoms of TB disease: a cough for >2 weeks, night sweats, low-grade fever and weight loss.
• Important strategies to intensify case-finding are contact tracing and regular screening among PWUD.
• IGRA is the preferred method for LTBI testing among PWUD compared to TST, but it is not widely available in resource-limited settings.
• There are five equally important steps of medical evaluation for TB disease.

End of Module 2
MODULE 3: GENERAL PRINCIPLES OF TB TREATMENT AND CARE

Module Goal: To provide an overview of TB treatment and care, main side effect management and the importance of a patient-centred approach.

Learning Objectives: By the end of the module, participants will be able to:
• name and describe two main types of TB treatment;
• discuss isoniazid prevention therapy (IPT);
• name major side effects of TB treatment in PWUD;
• discuss the importance of treatment adherence; and
• discuss a patient-centred approach and the applicability of the Patients’ Charter in their own setting.

Topics covered:
• TB treatment and side effects
• Implications of TB treatment in PWUD
• Treatment adherence
• Patient-centred care
• International Patients’ Charter for TB Treatment and Care (with a practical exercise).

Materials and resources required:
• Computer/laptop
• Flipchart paper, stand and pencils
• Rooms for small-group work if available
• Printed copies of the International Patients’ Charter for TB Treatment and Care (for all participants).

Module time: approximately 135 minutes
Show and read to Slide 3.2 and Slide 3.3 (Module 3: General Principles of TB Treatment and Care):
Show and read to Slide 3.4 (Co-trimoxazole Preventive Therapy (CPT) for TB Patients Living with HIV):

Co-trimoxazole Preventive Therapy (CPT) for TB Patients Living with HIV

- People living with TB/HIV should have access to CPT
- All HIV+ people with CD4<200 should be on CPT
- Reduced mortality, morbidity and hospitalization among smear-positive TB patients with HIV
- Simple, well-tolerated, cost-effective; can be administered concomitantly to ART.

Supporting content:
TB patients living with HIV should have access to co-trimoxazole preventive therapy (CPT). Co-trimoxazole is a broad-spectrum antimicrobial agent that prevents a range of secondary bacterial and parasitic infections in eligible adults and children living with HIV. Most commonly known diseases that are prevented by CPT are toxoplasmosis and pneumocystic pneumonia. CPT should be implemented as an integral component of the HIV chronic care package. CPT is a simple, well-tolerated and cost-effective intervention for PLHIV and can be administered concomitantly to ART. People with a CD4 count of <200 cells per mm$^3$ should be on CPT.

Data from African countries provide grounds for more extensive use of CPT. For example, there is a recommendation that children of HIV-positive mothers should start at six to eight weeks after birth until HIV has been excluded and the child does not have a risk of acquiring HIV through breastfeeding. Also, WHO recommends that people co-infected with TB/HIV should receive CPT regardless of CD4 count. It is worth emphasizing that data supporting these recommendations come from African countries, and application of this recommendation in EECA countries still needs be supported. (Source: WHO policy on collaborative TB/HIV activities: guidelines for national programmes and other stakeholders, World Health Organization, 2012.) National guidelines, therefore, may vary per country.

Show and read to Slide 3.5 (Two Types of TB Treatment):
Two Types of TB Treatment

1. Treatment of LTBI
2. Treatment of active TB disease

Supporting content:
There are two types of treatment for TB:
1. treatment of LTBI for people who have been exposed to TB and become infected but are not sick or infectious; and
2. treatment of active TB disease for people who are sick.
(Source: Treatment Action Group TB/HIV Advocacy Toolkit.)

Show and read to Slide 3.6 (IPT):

- TB preventive therapy with INH is safe and effective in people living with HIV, reducing the risk of TB by 33–62%
- TST is not a requirement for initiating IPT in people living with HIV
- People living with HIV who have a positive TST benefit more from IPT; TST can be used where feasible to identify such individuals.

Supporting content:
Isoniazid prevention therapy (IPT): isoniazid (INH) is a drug given to people with LTBI to prevent progression to active disease. HIV programmes should provide IPT for PLHIV, provided the patient does not have active TB. IPT can be used with ART drugs. IPT is part of the Three I’s to decrease the burden of TB in PLHIV, along with intensified case-finding (ICF) and (TB) infection control (TB-IC).

Show and read to Slide 3.7 – 3.9 (IPT for PWUD):
### IPT for PWUD

- Observational studies have shown decreased TB incidence among PWUD after six and 12 months of INH.
- IPT should be dispensed with other treatments, such as OST, in settings where this is implemented.

### IPT for PWUD

- IPT should be given irrespective of the degree of immunosuppression, and also to those on ART.
- Past history of TB and current pregnancy should not prevent the start of IPT.

### Supporting content:

All adults and adolescents living with HIV with unknown or positive TST who are unlikely to have active TB should receive at least six months of IPT as part of a comprehensive package of HIV care. IPT should be administered:

- irrespective of CD4 count;
- to those on ART;
- to pregnant women; and
- to those previously treated for TB.

Regarding the efficacy of LTBI treatment in reducing the incidence of TB disease among both HIV-negative and HIV-positive individuals, observational studies have shown decreased TB incidence among PWUD after six and 12 months of INH. Currently, the CDC recommends nine months of once-daily INH for HIV-negative individuals, with twice-weekly administration as DOT an acceptable alternative. Implementing HIV treatment support strategies such as treatment literacy and support groups is likely to help support IPT adherence. IPT should be dispensed with other treatments, such as OST, in settings where this is implemented.

Past history of TB and current pregnancy should not prevent the start of IPT. It should be given irrespective of the degree of immunosuppression, and also to those on ART. Adults and adolescents living with HIV who successfully complete their TB treatment should continue to receive INH for another six months and should conditionally receive it for 36 months based on the local situation (e.g. high rates of TB prevalence and transmission) and existing national guidelines.
Monitoring IPT

<table>
<thead>
<tr>
<th>Minor side effects</th>
<th>How to respond to side effects</th>
</tr>
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<tbody>
<tr>
<td>- anorexia, nausea, abdominal pain</td>
<td>Continue INH and: Give INH at bedtime</td>
</tr>
<tr>
<td>- Joint pains</td>
<td>Give aspirin</td>
</tr>
<tr>
<td>- Burning sensation in the feet</td>
<td>Give pyridoxine 100 mg daily</td>
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</table>

<table>
<thead>
<tr>
<th>Major side effects</th>
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<tbody>
<tr>
<td>- New itching of skin or skin rash</td>
<td>Stop INH</td>
</tr>
<tr>
<td>- Dizziness (vertigo/nystagmus)</td>
<td></td>
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<tr>
<td>- Jaundice</td>
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<tr>
<td>- Vomiting</td>
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<td>- Confusion</td>
<td></td>
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<tr>
<td>- Convulsions</td>
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(Sources: Deiss et al., 2009; Policy guidelines for collaborative TB and HIV services for injecting and other drug users, WHO, UNODC, UNAIDS, 2008.)

TOPIC 2: IMPLICATIONS OF TB DISEASE TREATMENT IN PWUD

Activity: Lecture presentation

Section Time: Approximately 30 minutes

Implication of HIV and TB co-infection, interaction of treatments, multiple co-infections

Anti-TB Treatment

- Two phases:
  1. initial phase  2–3 months
     Usually 4 drugs
  2. continuation phase  4–5 months
     Usually 2 drugs

- When properly implemented, TB treatment can be highly successful, with cure rates of greater than 95%.

Supporting content:

When properly implemented, TB treatment can be highly successful, with cure rates of greater than 95%. TB treatment regimens consist of two phases: an initial phase and a continuation phase. The standard TB regimen worldwide includes a two-month intensive phase of four drugs: INH, rifampin or rifampicin, ethambutol, pyrazinamide and streptomycin are designated as the first-line drugs. All are pills, except for streptomycin (injection). INH and rifampicin exist in fixed dose combinations (FDC). The duration of the initial phase is two to three months, and the continuation phase is four to five months. Usually during a continuation phase INH and rifampicin only are given daily for four months, administered most effectively by DOT. Each TB drug has an abbreviation (ethambutol: E, isoniazid: H, pyrazinamide: Z, rifampicin: R, streptomycin: S).
New TB patients living with HIV should
• receive a TB regimen containing six months of rifampicin (2HRZE/4RH) on a daily schedule; and
• be started on ART regardless of CD4 count as soon as possible within the first eight weeks of anti-TB treatment.

Supporting content:
Routine HIV testing should be offered to all patients with presumptive and diagnosed TB. New TB patients living with HIV should receive a TB regimen containing six months of rifampicin (two months of INH, rifampicin, pyrazinamide and ethambutol, followed by four months of rifampicin and INH, 2HRZE/4RH) on a daily schedule and should be started on ART regardless of CD4 count as soon as possible within the first eight weeks of anti-TB treatment. Present evidence clearly shows that TB relapse in HIV-infected patients is minimized by a regimen containing rifampicin throughout the course of treatment. Most first-line TB drugs are safe for use in pregnancy. The exception is streptomycin, which is ototoxic to the foetus and should not be used during pregnancy (except for meningeal infections) or lactation. (Sources: Management of Tuberculosis and HIV coinfection. Clinical protocol for the WHO European region; HIV/AIDS Treatment and care clinical protocols for the WHO European region, World Health Organization; Treatment of tuberculosis: guidelines for national programmes, Fourth edition, WHO, 2010.)

The main factors to consider in selecting the best antiretroviral regimens for TB patients are:
• potency;
• side effects and toxicity; and
• simplicity – to allow better adherence.

Supporting content:
Highly active antiretroviral treatment (HAART) reduces mortality in TB/HIV patients and is the standard recommended ART. It includes three, or in some cases more, antiretroviral drugs. The main factors to consider in selecting the best antiretroviral regimens for TB patients are:
• potency;
• side effects and toxicity; and
• simplicity, to allow better adherence.

ART during TB treatment requires giving special consideration to:
• interactions between rifampicin and some antiretrovirals;
• pill burden;
• the importance of high adherence;
• drug toxicity; and
• the risk of immune reconstitution syndrome.
(Source: Management of Tuberculosis and HIV coinfection. Clinical protocol for the WHO European region.)

Show Slide 3.14 and Slide 3.15 (Considerations for PWID Patients with TB/HIV Co-infection):

<table>
<thead>
<tr>
<th>Considerations for PWID Patients with TB/HIV Co-infection</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Hepatotoxicity</td>
</tr>
<tr>
<td>• Methadone and rifampicin</td>
</tr>
<tr>
<td>• Rifampicin and PIs</td>
</tr>
<tr>
<td>• Methadone and rifabutin</td>
</tr>
<tr>
<td>• Adherence levels</td>
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<tr>
<td>• Access to the health care system</td>
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<tr>
<th>Considerations for PWID Patients with TB/HIV Co-infection</th>
</tr>
</thead>
<tbody>
<tr>
<td>• None of the treatment issues above absolutely contraindicates standard TB/HIV treatment regimens and treatment for associated morbidity in PWUD.</td>
</tr>
</tbody>
</table>

Supporting content:
There are potential drug interactions between anti-TB drugs, ART, alcohol, methadone and buprenorphine, some illicit drugs and drugs for other infections such as hepatitis B and C. However, neither medication for TB first-line drugs nor ART are contraindicated among PWUD who have hepatitis B or C.

Most studies demonstrate an increased rate of side effects during TB therapy among HIV-infected people. The clinical management of TB/HIV in PWID is challenging and requires more effort due to the following factors:
• interaction of TB and antiretroviral drugs with illicit drugs and resultant increased hepatotoxicity in those PWID receiving OST (concern with nevirapine (NVP));
• larger likelihood of co-infection with hepatitis C and/or B and, therefore, of potential drug interactions with hepatitis drugs;
• a decrease in methadone levels (33–68%) or withdrawal caused by rifampicin (the methadone dose may need to be increased). Rifampicin should not be administered with lopinavir/ritonavir (LPV/r), nelfinavir (NFV) or saquinavir (SQV) in patients receiving methadone substitution therapy. Rifabutin is an option, administered as 150 mg three times/week with LPV/r or 300 mg three times/week with NFV;
• Rifampacin also accelerates the metabolism of protease inhibitors (PIs). There are no reported interactions between methadone and rifabutin, so rifabutin may be an alternative in combination with PIs. Rifabutin should not be used together with SQV;
• Additive toxicity: peripheral neuropathy concern with stavudine (didehydro-deoxythymidine or d4T);
• decreased adherence levels; and
• decreased access to the health care system.
Collaboration with harm reduction programmes may be essential in organizing effective outreach services such as education, screening, TB preventive treatment, DOT for TB and the tracing of treatment defaulters.

(Sources: HIV/AIDS Treatment and Care Clinical Protocols for the WHO European Region; Policy guidelines for collaborative TB and HIV services for injecting and other drug users, WHO, UNODC, UNAIDS, 2008.)

<table>
<thead>
<tr>
<th>Drug</th>
<th>Use</th>
<th>Effects</th>
<th>Interactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rifampicin (Rifampin)</td>
<td>Treatment of pulmonary TB</td>
<td>Possibly severe decrease in methadone levels (33–68%). May induce methadone withdrawal. A methadone dose increase may be required</td>
<td>PIs contraindicated. Rifampin should not be co-administered with LPV, NFV, SQV. Rifabutin may be a potential alternative, but not in combination with SQV.</td>
</tr>
<tr>
<td>Rifampin/isoniazid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rifabutin</td>
<td>Anti-mycobacterial treatment of pulmonary TB</td>
<td>No change in methadone levels. Mild narcotic withdrawal symptoms.</td>
<td>Some interactions (refer to Protocol 1, Patient evaluation and antiretroviral treatment in adults and adolescents), but rifabutin may be a preferred option for the treatment of pulmonary TB as an alternative to rifampicin. Monitor for toxicities and dose adjustments.</td>
</tr>
</tbody>
</table>

Show Slide 3.16 (Side Effects) and Slide 3.17 (Side Effects of TB Drugs: Requiring Urgent Action):

**Side Effects**
- are all other effects produced by medication, besides its directly intended effect
- can be therapeutic (good) or adverse (bad)
- not every person will develop side effects
- are described in the consumer medicine information leaflet
- most drugs have side effects
- can be a result of interaction of TB drugs with other drugs or food/alcohol

**Side Effects of TB Drugs: Requiring Urgent Action**
- Nausea and vomiting
- Skin itch and rash
- Yellow eyes
- Dizziness
- Pain or burning of the feet
- Vision problems
- If you have any of these problems, go immediately to the health centre.

**Supporting content:**
Side effects are secondary effects to the effect expected of a drug. Most drugs have side effects, some of which can be therapeutic (good, useful or neutral) or adverse – undesirable or even dangerous. Side effects can be immediate – after hours or days – or can present themselves after a long period of time – months or years after taking a drug. Patients should be informed about side effects so that they can make decisions together with the health care worker about their treatment. Information about side effects can
be read in medicine information leaflets. There are side effects which occur frequently, rarely or very rarely.
As with all drugs, TB medication can cause side effects. If you have any of the problems listed on Slide 3.19, go immediately to the health centre. Urine and tears may turn orange. This is normal and no cause for concern.

Show and read to Slide 3.18 (MDR-TB Treatment) and Slide 3.19 (MDR-TB Treatment for PWUD):

<table>
<thead>
<tr>
<th>MDR-TB Treatment</th>
<th>MDR-TB Treatment for PWUD</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Drug Susceptibility Testing (DST) whenever possible</td>
<td></td>
</tr>
<tr>
<td>• Individualized or standardized regimens</td>
<td></td>
</tr>
<tr>
<td>• Treatment duration of about two years</td>
<td></td>
</tr>
<tr>
<td>• Most programmes in the world recruit small numbers of patients and successful outcome is achieved in &lt;75% of individuals overall</td>
<td></td>
</tr>
<tr>
<td>• Emergence of TB drug resistance is particularly notable in countries with large populations of PWID.</td>
<td></td>
</tr>
<tr>
<td>• In addition, PWID have an increased risk of TB reactivation and increased risk of developing MDR-TB.</td>
<td></td>
</tr>
<tr>
<td>• Much more data are needed to better understand dosing of second-line drugs, safety and toxicity, and drug-to-drug interactions in PWUD.</td>
<td></td>
</tr>
</tbody>
</table>

Supporting content:
TB treatment regimens used to treat drug-resistant organisms may be individualized (designed on the basis of previous TB treatment history and individual DST results) or standardized (designed on the basis of representative drug resistance surveillance data) depending on the availability of DST and on national policy. Some regimens are standardized until DST results are available, and then treatment is individualized based on results.
Second-line drugs are used in MDR-TB treatment. There are six categories of second-line drugs. They are more expensive than the first-line drugs, have more side effects and are not readily available in many countries of the world. According to the WHO Global TB Report 2011, diagnosis and appropriate treatment of MDR-TB remain major challenges. Treatment of MDR-TB is longer (average of two years), more complicated and less effective than for drug-susceptible TB. Most programmes in the world recruit small numbers of patients, and a successful outcome is achieved in less than 75% of individuals overall. (Source: Global MDR report 2011.)

Show and read to Slide 3.20 and Slide 3.21 (TB Treatment Monitoring):

<table>
<thead>
<tr>
<th>TB Treatment Monitoring</th>
<th>TB Treatment Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Sputum smear conversion from positive to negative at two weeks or</td>
<td></td>
</tr>
<tr>
<td>• Culture conversion at two months indicates that a person is no longer infectious</td>
<td></td>
</tr>
<tr>
<td><strong>he/she must still complete the full course of treatment</strong></td>
<td></td>
</tr>
<tr>
<td>People on TB treatment who were previously sputum smear positive with:</td>
<td></td>
</tr>
<tr>
<td>• two subsequent negative sputum smears and</td>
<td></td>
</tr>
<tr>
<td>• completed six to eight months of treatment (sensitive TB)</td>
<td></td>
</tr>
<tr>
<td><strong>are considered cured</strong></td>
<td></td>
</tr>
</tbody>
</table>
Supporting content:
Sputum smear conversion from positive to negative at two weeks or culture conversion at two months indicates that a person is no longer infectious; he or she must, however, still complete the full course of treatment. People on TB treatment who were previously sputum-smear-positive with two subsequent negative sputum smears and completed six to eight months of treatment are considered cured.

TOPIC 3: TREATMENT ADHERENCE AND PATIENT-CENTRED APPROACH
Activity: Lecture presentation, group work
Section Time: Approximately 15 minutes

Show and read to Slide 3.22 (Adherence in PWUD)

Adherence in PWUD

The need for adherence support measures:
• to ensure the best possible treatment outcomes;
• to reduce the risk of development of drug resistance; and
• to reduce the risk of transmission to other people.

Supporting content:
Adherence means following one’s treatment regimen – taking the correct dose of each anti-TB medication at the correct time and exactly as prescribed. TB treatment requires full adherence, preferably under direct observation and should follow national or, in their absence, international guidelines. PWID often have low adherence levels and lack access to the health care system. There should be specific adherence support measures for PWUD to ensure the best possible treatment outcomes for TB and HIV infection and to reduce the risk of development of drug resistance and the risk of transmission to other people.

HIV programmes and TB control programmes should collaborate with harm reduction services to ensure universal access to comprehensive TB and HIV prevention, diagnosis, treatment and care as well as drug treatment services, including OST, for PWUD in a holistic person-centred approach to maximize access and adherence within one.

Show and read to Slide 3.23 (Patient-Centred Approach):
Patient-Centred Approach

TB and HIV prevention, care and treatment should be:
• coordinated with all services;
• provided in one setting if possible; and
• different regimens in a package that is easily accessible.

Supporting content:
TB and HIV prevention, care and treatment should be coordinated with all services and should be provided in one setting if possible, rather than cross-referring clients. Services should use the local tools in use to identify people who may have TB, which can be adapted for settings where PWUD access help, such as low-threshold or drug treatment services that are not in the health sector. At a minimum, these should include a simple set of questions on the symptoms and signs of TB. Sputum sampling for TB and blood testing for HIV can be offered safely in many non-health care settings if personnel are trained in counselling and carrying out the procedures. They should have access to safe laboratory services and the appropriate TB or HIV specialist service to which they can refer people if necessary. TB treatment, especially when DOT is used, should be combined with HIV care and treatment interventions, OST and other medication regimens in a package that is easily accessible, so that PWUD are not required to attend multiple sites at multiple times. Home-based care should be preferred for TB/HIV patients, to limit their time of hospitalization and risk of superinfection by MDR-TB strains. (Source: Policy guidelines for collaborative TB and HIV services for injecting and other drug users, WHO, UNODC, UNAIDS, 2008.)

Show Slide 3.24 (Group Work: Patients’ Charter for TB Treatment and Care): instruct the participants according to the slide.

Group Work: Patients’ Charter for TB Treatment and Care
• Read the Patients’ Charter for TB Treatment and Care (5 minutes)
• Discuss in your group how this document can be used in your country/setting: by your organization (20 minutes)
• Present the main points in plenary (20 minutes)

Show Slide 3.25 (Summary: Learning Points) and summarize
Summary: Learning Points

• The main elements of the DOTS strategy
• Discuss IPT
• Common side effects of TB treatment, and when to seek medical advice
• Why is treatment adherence important?
• Main considerations of a patient-centred approach (Patents’ Charter) in your setting

End of Module 3
MODULE 4: TB INFECTION CONTROL

Module Goal: To provide an overview of TB infection control (TB-IC) and activities that can be implemented by/in harm reduction CSOs and at the community level.

Learning Objectives: By the end of the module, participants will be able to:
• provide the rationale for a hierarchy of different TB-IC measures;
• give examples of TB-IC activities; and
• discuss TB-IC activities in harm reduction settings and at the community level.

Topics Covered:
• Hierarchy of TB-IC measures
• Administrative controls
• Cough etiquette
• Protection of health care workers.

Materials and resources required:
• Computer/laptop, speakers
• Access to internet
• Short video (YouTube)
• Flipchart paper, stand and pencils

Module time: approximately 90 minutes.

Show and talk to Slide 4.1 (Module 4: TB Infection Control) outlining the module:
Supporting content:
The WHO policy on TB infection control in health-care settings, congregate settings and households, 2009 addresses TB and HIV prevention by means of administrative, environmental and personal respiratory protection controls and managerial activities. 

TB Infection Control at the Community Level: a training handbook is to facilitate understanding and use of the Simplified Checklist for TB Infection Control, with a particular emphasis on settings where TB, HIV and TB with HIV are prevalent. Included are practical ‘how-to’ activities that community health workers and TB programme implementers can use in planning and organizing educational sessions on TB-IC in their communities. These activities were also designed to raise awareness and promote practical action to help community health workers, including TB treatment and adherence supporters, to avoid becoming infected while working with the communities they serve. The checklist serves as a reminder of the things community health workers need to do on home visits or during community meetings.

(Sources: WHO policy on TB infection control in health-care settings, congregate settings and households, 2009; TB Infection Control at the Community Level: a training handbook.)

Show Slide 4.3 (What is the Risk of TB Transmission?) and Slide 4.4. (Overcrowding in Prisons) and facilitate a discussion.
To facilitate the discussion: Ask participants where, in their opinion, is the highest risk of TB transmission and why.

Supporting content:
- The pictures represent different settings (from left to right and top down: out-patient waiting room in Peru; traditional house in Ethiopia; TB archives in Romania; TB ward in Peru; isolation tents for XDR-TB cases in Swaziland).
- What is the potential for TB transmission in the settings shown in the slides? (Photos in Slide 4.3 are from Control de infecciones de tuberculosis en establecimientos de salud – Módulo de capacitación. Ministerio de Salud, Peru (upper and lower left pictures, courtesy of Paul Jensen) and courtesy of GB Migliori (upper centre and right picture) and Mario C. Raviglione (lower right picture)). (Source: TB-IC Generic lectures, WHO.)

Show and explain Slide 4.5 (Who Can Infect Whom?):

Supporting content:
- The slide shows the three actors of the play: patient, worker, visitor.
- The arrows indicate that patients can infect other patients, workers or visitors.
- Likewise, workers can infect patients, other staff or visitors, and visitors can infect patients, workers and other visitors.

Show Slide 4.6 (When is TB Most Infectious?): remind the participants when TB is most infectious.

Show Slide 4.7 (Hierarchy of TB-IC Measures):
Supporting content:
In the hierarchy of TB-IC measures, administrative controls come first, followed by environmental and personal protective equipment (respiratory protection).

In this module we will focus on administrative controls and a few managerial activities such as addressing Advocacy, Communication and Social Mobilization (ACSM) and conducting on-site surveillance of TB among health workers, community health workers or paid and unpaid NGO staff. Advocacy targets opinion leaders at the community level on the need for local action. Communication aims to change knowledge, attitudes and practices among various groups of people. Social mobilization brings together community members and other stakeholders to strengthen community participation for sustainability and self-reliance.

The basic environmental control that can be practised at an NGO or in a household setting is ensuring proper ventilation of premises. In terms of personal protective equipment (PPE), in high- or very high-risk areas, such as culture laboratories and sputum induction, health care workers are advised to wear respirators. To ensure a proper fit of a respirator, a respirator fit test should be performed first.

Show Slide 4.8 (Administrative Controls):

Supporting content:
Administrative controls in health care settings imply strategies to promptly identify potentially infectious cases (triage), separate them, control the spread of pathogens (cough etiquette) and minimize the time that patient spends in health care settings.
Historically, the term ‘triage’ referred to health care services in an emergency situation (as in a Casualty department after a large accident) where the patients cannot all be treated at once. In the original context ‘to triage’ means to identify and treat those in most immediate danger of death, to save their lives first.

When used in infection control, triage refers to identifying, separating and fast-tracking potentially infectious TB patients for services, to minimize exposure to others.

If TB diagnostic services not available on-site, the facility should have an established link with a TB diagnostic and treatment centre. Ideally, the link should include an arrangement that would allow sputum samples to be collected and sent to the nearest laboratory.

Cough etiquette should be promoted among patients, visitors and health care workers. More about this is in the next slide.

Show and read to Slide 4.9 (Promote Cough Etiquette) and show a film on Slide 4.10 (Cough Etiquette):

**Promote Cough Etiquette**

- Use tissue or cloth to cover nose and mouth when coughing or sneezing.
- Use surgical mask if the patient is unable to cover their own cough or is moving through the facility.
- If no physical barrier is available, cover mouth and nose with bend of the elbow.
- Posters in all patient care and staff areas.
- Staff vigilance to identify coughing patients in waiting areas (if missed by triage).

**Cough Etiquette**

- http://youtu.be/hhlYCHjkRg8

Show and read to Slide 4.11 (Protection of Health Care Workers)

**Protection of Health Care Workers**

1. Appropriate information and training
2. Encourage HIV testing
3. Encourage TB diagnostic investigation

All health care workers whose duties involve face-to-face contact with suspected or confirmed TB should be in a TB screening programme.

**Supporting content:**

Protecting health workers and NGO staff (paid and unpaid) is an integral part of administrative control. Staff need appropriate training. Staff with potential TB exposure are:

- staff with face-to-face contact with suspected or confirmed TB cases (physicians, nurses, social workers etc.);
- staff that do not provide patient care but may be exposed, such as janitors;
- staff working off-site for home visits, DOT;
- paid and volunteer staff, students and trainees; and
- part-time, full-time, temporary and contract staff.

Training should be provided upon first assignment, and then yearly. It should cover at least these topics:

- How TB spreads, signs and symptoms of TB
- The fact that anyone can develop TB, even if they are already TB-infected or have received BCG
- Increased risk of TB disease in people with HIV infection or other immune suppression
- HIV prevention (in and outside workplace).

Provide job-specific information on:

- responsibilities for implementing TB-IC policies; and
- measures to protect themselves from TB.

Show and read to Slide 4.12 (HIV-positive Health Care Workers)

**HIV-positive Health Care Workers**

- Prevent exposure to untreated TB
  - Relocate to work in a lower-risk area
  - Maintain confidentiality
- Ensure knowledge of TB signs and symptoms, and encourage care-seeking if they develop
- Regular screening for active TB
- Ensure access to IPT for those who need it
- Access to ART

**Supporting content:**

- HIV-positive health care workers should not be working with patients with known or suspected TB.
- HIV-positive health care workers should be relocated to lower-risk areas, away from positions where exposure to untreated TB is likely.


Show and read to Slide 4.13 (TB Screening of Health Care Workers):

**TB Screening of Health Care Workers**

- Provide free diagnostic testing for TB if they:
  - develop TB signs or symptoms; or
  - are exposed to smear-positive and culture-positive TB patients.
- Annual screening of health care workers not shown to be effective in decreasing diagnostic delays
  - Some studies show that annual chest x-rays may not be effective. Recommendations may vary in different countries.
Supporting content:

- All health care workers should be provided with free diagnostic testing for TB if they develop signs or symptoms of TB or are exposed to an infectious TB case.
- Annual screening of health care workers has not been shown to effectively decrease diagnostic delays. This is because only a fraction of those who develop TB do so around the time of their screening.
- Some studies show that annual chest x-rays of staff are not an efficient measure. But recommendations may vary in different countries.


Show Slide 4.14 (Scenario 1) and Slide 4.15 (Scenario 2):

Scenario 1

- You are a health care worker going to visit a newly referred TB patient. The patient is a 28-year-old man who lives with his wife and three children in a small one-room house with two windows and a door. The windows are closed. The wife invites you in and offers you tea. The patient and his wife appear quite thin. The patient is coughing, but his wife is not. The children are 2, 3 and 6 years old. They look healthy and are playing indoors.

Scenario 2

- You are a community health workers’ supervisor based at the local health care facility. You are concerned about a community health worker who has worked for you for many years and is excellent with some of the most challenging patients in the community. She has appeared thin and pale over the last few months and seems to be losing weight.

To facilitate discussion: Split participants into two groups. Let group 1 discuss scenario 1 and group 2 discuss scenario 2. Allocate 10–15 minutes for discussion.

Supporting content:

**Scenario 1**

You are a community health worker going to visit a newly referred TB patient. The patient is a 28-year-old man who lives with his wife and three children in a small one-bedroom apartment with two windows and a door. The windows are closed. The wife invites you in and offers you tea. The patient and his wife appear quite thin. The patient is coughing, but his wife is not. The children are two, three and six years old. They look healthy and are playing indoors.

Key issues

- Cough hygiene
- Patient’s knowledge of TB and HIV
- TB and HIV status of the wife
- Vulnerability of the children
- Ventilation issues for the community health worker’s home visit (advice to open the windows)
- Standard interventions, such as health education
- Contact investigation on the children.
Supporting content:

Scenario 2
You are a community health workers’ supervisor based at the local health care facility. You are concerned about a community health worker who has worked for you for many years and is excellent with some of the most challenging patients in the community. She has appeared thin and pale over the last few months and seems to be losing weight.

Key issues
- HIV and TB status of community health workers
- Counselling and health education
- Employee health policies and practices, such as access to health service (staff clinic model)
- Confidentiality, workers’ compensation scheme and occupational safety
- Community health workers’ surveillance
- Stigma and avoidance of TB, HIV screening or both
- Fear of losing her job or being relocated.

Show and summarize with the group Slide 4.16 (Summary: Learning Points):

Summary: Learning Points
- The cheapest and cost-effective measure of TB-IC is administrative control.
- Examples of TB-IC measures at your NGO can be...

End of Module 4
PART II - TB SERVICES for PWUD (Maria Kharchenko)

MODULE 1: INTERNATIONAL TB PREVENTION AND TREATMENT RECOMMENDATIONS AND GUIDELINES, INCLUDING SPECIAL CARE FOR PEOPLE WHO USE DRUGS AND TREATMENT OF CO-INFECTIONS WITH HIV AND HEPATITIS C

Module Goal: To provide an overview of internationally recognized recommendation and guidelines for treatment of TB and other infections.

Learning Objectives: By the end of the module, participants will be able to:
- describe the main recognized TB prevention and treatment strategies;
- define TB prevention strategies suitable for PWUD; and
- summarize TB intervention strategies in relation to drug use and to other infections (HIV and hepatitis C).

Thematic topics covered:
- Main principles of care for PWUD (review of international guidelines and recommendations)
- STOP TB Strategy
- DOTS Strategy.

Materials and resources required for the session delivery:
- Laptop, projector.

Time required for the module delivery: 60 minutes.

Slides and commentaries on topics:

Show and talk to Slide 1.1 (Module 1: International Recommendations and Guidelines) outlining the module:
TOPIC 1: KEY TB CONTROL PRINCIPLES SUITABLE FOR PWUD

Activity: Lecture presentation, group discussions, small-group work

Section Time: 25 minutes

Session Objective: To give the participants basic knowledge about principles of work with PWUD as part of TB control.

Group work (10 minutes): Participants discuss in plenary or in small groups and answer the following question: Why are PWUD singled out as a separate group when it comes to TB control? At the end of the discussion the facilitator summarizes the answers.

Show Slide 1.2 (Group Work)

Why, during the planning of TB control activities, are PWUD considered a separate group?

To facilitate the discussion: Ask participants which factors related to drug use make PWUD vulnerable to TB? Using the participants’ answers, pay attention to the following factors:

- Drug use is often associated with incarceration, homelessness and/or poor living conditions (for instance, poor nutrition).
- In our region there is high HIV prevalence among PWUD, and TB is a common opportunistic disease and the leading cause of mortality among PLHIV. PWUD do not have universal access to TB testing, due to their marginalization, discrimination in the health care system against PWUD, lack of ‘PWUD-friendly’ services and little knowledge about TB among PWUD.
- PWID have higher chances of contracting HIV and are more likely to be infected with TB or MDR-TB and develop TB disease or MDR-TB disease. Compared to drug-sensitive TB, MDR-TB requires longer treatment, using more expensive drugs.
- Special activities are required to ensure treatment adherence among PWUD.
- PWUD are often in need of social support (by family, household), which is very important for treatment adherence and eventual treatment success.

Supporting content:

In the early 1970s, before the emergence of HIV, incidence of TB infection and disease among PWUD in some countries was already more than 10 times higher than in the general population. According to some research results, both HIV-positive and HIV-negative PWUD had similar rates of TB infection. Even in HIV-negative PWUD the rate of TB infection was still significantly higher than in the general population. A higher rate of TB infection among PWUD is likely to be related to such risk factors as incarceration, homelessness and poverty. Currently, due to the spread of HIV among PWID, the situation has worsened, since we now have to deal with a dual epidemic.
TB is the leading cause of mortality among PWID living with HIV. Mortality from all causes and TB-related mortality are several times higher among PLHIV who use drugs, compared to PLHIV who do not use illicit drugs.

Currently most TB cases among PWID are due to reactivation of LTBI because of HIV. A separate risk group is PWID who have been incarcerated, even if they are HIV-negative. There is evidence that HIV-positive PWUD are at higher risk of MDR-TB. Drug use is associated with a lower rate of completion of anti-TB treatment, which is the main risk factor for developing drug resistance. PWUD are more exposed to drug-resistant TB in places of incarceration, where the incidence of MDR-TB is mostly higher than in the general population.

**Show and talk to Slide1.3 (Policy Guidelines)**


**Supporting content:**

*Policy Guidelines* is a framework document giving specific recommendations on the organization of HIV and TB control among PWUD.

**Highlight:**

- that guidelines recommending collaborative TB and HIV services for PWUD were created at a high level, which shows that the international community acknowledges the seriousness of the problem. It indicates the uniqueness of the interventions which have to be made to achieve integration; and
- recommendations generally do not aim to create new services; rather, they suggest integrating existing services. Point out the importance of joint planning in all three areas: TB, HIV and substance-dependence treatment and services.

**Show and talk to Slide1.4 (Guiding Principles):**
Guiding Principles

• Justice, equality
• Access to services
• Public health
• Harm reduction

Supporting content:
1. **Justice.** PWUD are entitled to equal access to all services related to TB and HIV prevention, treatment and care, without the threat of being arrested, persecuted or treated with cruelty. The facilitator can discuss with the group how exactly these rights can be violated (not prescribing treatment because of drug addiction; treatment not available in outpatient facilities; breaching confidentiality of diagnosis (including drug addiction) – by means of registration in databases which can be accessed by law enforcement institutions).

2. **Access.** The main strategy to improve access is to concentrate services in one location and provide them free of charge. An integrated service provision model minimizes the chances of stigmatization based on the fact that a client has come to receive certain services. **Underline the fact that availability of services does not yet mean that these services are accessible. It is possible to play a game of ’most inaccessible service’**.

3. **Public health.** Reducing the burden of TB among PWUD contributes to the health of their families, contacts and the community. The facilitator can highlight that this principle means that effective TB control programmes for PWUD are beneficial for society at large and that this problem is not only relevant for the PWUD community.

4. **Harm reduction** is a range of principles, political actions, programmes, services and interventions which aim to reduce the harmful consequences associated with drug use. Harm reduction applies to individuals as well as to different social groups and society in general. *(For more information see Annex 1.)*

*Show and talk to Slide 1.5 (Key Interventions 1)*

**Key Interventions 1**

SIMPLY PUT: In any location where PWUD congregate there should be a TB infection prevention and control plan. This plan outlines activities necessary to decrease the risk of TB infection among PWUD and people who work with PWUD. In all congregate facilities, such as health care facilities, substance-dependence treatment facilities and penitentiaries, there should be a TB infection control plan supported by all stakeholders. The plan has to include administrative controls, environmental controls and personal respiratory protective equipment to prevent the spread of TB.
**Supporting content:**

Highlight the key messages of:

- **where** having an infection control plan is recommended (health care facilities, penitentiaries, substance-dependence treatment facilities). Underline that it can be a drop-in centre, consultation room or a ‘drug den’; and
- **for whom** the plan is recommended: not only for PWUD who visit the facility but also for facility staff members.

**Workshop in small groups** (10 minutes):

You run a low-threshold centre staffed by three consultants, one expert in narcology and one psychologist. The centre works 24/7 and is visited by 20 to 100 who actively use injecting drugs. In addition to individual consultations there are group sessions. Outline the main activities which can be included in a TB infection prevention and control plan at your centre.

*Show and talk to Slide1.6 (Key Interventions 2)*

**Key Interventions 2**

**SIMPLY PUT:**

All staff members of facilities involved in providing services to PWUD should know about HIV and TB. Staff should inform clients, offer testing and, if necessary, refer clients for further examination.

All service providers who work with PWUD should follow a TB and HIV case finding protocol. Staff members should know the symptoms of TB and HIV and be able to provide PWUD with access to TB and HIV testing and counselling.

**Supporting content:**

- Staff members should know about HIV and TB.
- A substance-dependence treatment facility should offer a package of services, including testing for TB and HIV. The key aspect is to have a package of health care services available to provide a good reason to be tested.
- Substance-dependence treatment facilities can offer TB testing, depending on the availability of equipment and trained staff. Screening for TB should be done at least, by asking a number of questions about symptoms of TB. Such screening should be done at low-threshold programmes and non-medical facilities which provide services to PWUD.
- Sputum and blood samples can be collected at non-medical facilities where staff are trained in pre- and post-test counselling and at collecting sputum and/or blood samples. For sputum collection it is necessary to have a designated convenient and well-ventilated area (e.g. outdoors). There should be access to quality-assured laboratories and also a procedure in place to refer clients to national TB or HIV programmes.
- All service providers need to ensure that close contacts, such as family members, of patients with TB disease are screened for TB infection (depending on the national guidelines) and, most importantly, for TB disease.

**Possible discussion points:** What are the main problems related to TB testing at substance-dependence treatment and service facilities and other service providers working with PWUD?
Possible list:
- What kind of testing to offer onsite (sputum collection, TST, chest x-ray)?
- How do you make sure clients come back for the result of their tests?
- What infection control norms have to be in place to make TB testing possible at (non-medical) sites?
- Patient referral for further testing or treatment
- Non-discrimination based on test results, in particular refusal to treat drug dependence because of TB disease.

Show and talk to Slide1.7 (Key Interventions 3)

**Key Interventions 3**

**SIMPLY PUT:**

*TB treatment should be organized in a way to maximize its accessibility to PWUD.*

TB, HIV and substance-dependence treatment services should provide PWUD with access to treatment which meets international, regional and national clinical guidelines. TB, HIV and substance-dependence treatment services should collaborate to monitor treatment and simplify the procedure of providing treatment.

**Supporting content:**
- TB treatment, especially DOT, needs to be provided to PWUD as part of one easily accessible package of services including HIV care and treatment, OST (this recommendation is not feasible in some countries of EECA) and other kinds of treatment. This is to improve the convenience, reduce stigmatization and reduce the number of client visits to different facilities and institutions.
- Training of medical staff who attend to PWUD should include drug interactions and possible side effects of several treatments, such as substance-dependence treatment and TB/HIV treatment.
- When considering TB/HIV treatment for PWUD, their special needs have to be taken into account, and they have to receive the same level of medical services and care as any other person.

Show and talk to Slide1.8 (Key Interventions 4)

**Key Interventions 4**

**SIMPLY PUT:**

All health care services should ensure access to isoniazid preventive therapy for PWUD living with HIV, after active TB is ruled out.

**Supporting content:**
• The possibility of isoniazid preventive therapy (IPT) to prevent TB disease should be considered among HIV-positive PWUD.
• Clinical evaluation and laboratory testing to exclude TB disease needs to be conducted in accordance with the national guidelines, before any decision about IPT is taken.
• Treatment support, including DOT, helps patients to adhere to and complete the full course of IPT.
• IPT should be used in combination with other kinds of treatment, such as OST, where applicable.
• **Note:** IPT is ineffective if there is resistance to isoniazid.

ART reduces the incidence of TB by as much as 80%, so that providing ART to PWUD living with HIV is also effective for preventing TB disease, and this effect is also additive when used with isoniazid. *(Source: Policy Guidelines for IDU, page 23.)*

**Practical work** (10 minutes): Divide participants into two groups: ‘health care workers’ and ‘PWUD’. The health care workers discuss why IPT is necessary; the PWUD discuss why they do not want to take IPT. Then each group presents their arguments and counter-arguments. The facilitator needs to make sure that real facts and ‘myths’ are addressed in both groups.

**Discussion questions:**
What testing should be done before IPT is prescribed?
• Importance of IPT
• Side effects of IPT and their management (based on the materials of the TB Literacy module)
• What factors define the length of therapy?
• What are the indications and counter-indications for IPT (focus on the safety and the importance of IPT during pregnancy)?

In different countries, recommended guidelines that refer to assignment and duration of the IPT treatment vary substantially. Numerous studies are being carried out to estimate how efficient IPT is for different categories of patients and for specific conditions (for example, the spread of drug resistance); results of these studies stipulate corrections introduced to the countries’ clinical guidance.

*Show and talk to Slide1.9 (Key Interventions 5)*

**Key Interventions 5**

**SIMPLY PUT:** HIV prevention among PWID is one of the most important ways to prevent TB among PWID.

All personnel working with TB suspects and patients, PLHIV and PWUD should be able to assess risk factors for HIV infection and transmission and should provide comprehensive HIV prevention information and services to their clients to minimize the risks. Personnel should also know how to protect themselves from exposure to HIV and TB.

**Supporting content:**
Group discussion: What measures of HIV prevention among PWID do you know? Emphasize the variety of prevention services, which is not limited to needle and syringe programmes, counselling and HIV testing.
TOPIC 2: STOP TB AND DOTS STRATEGIES

Activity: Lecture presentation, group discussions
Section Time: Approximately 20 minutes

Show and talk to Slide 1.10 (STOP TB Strategy):

STOP TB Strategy
- Sustaining, improving and accelerating quality DOTS expansion
- Addressing TB-HIV, MDR-TB and problems of vulnerable groups
- Contributing to health system strengthening based on primary health care
- Engaging all care providers
- Empowering patients and communities
- Enabling and promoting research

Supporting content:
The STOP TB Partnership, an international movement for collaboration in fighting TB, was initiated by WHO in 2000. In 2006 at the World Economic Forum in Davos, a 10-year STOP TB Strategy was adopted. One of the objectives of this strategy is to decrease TB mortality by 2015 down to the level of 1990.

Points to emphasize:
- The Stop TB Strategy relies on DOTS as a key and indispensable component of TB control.
- The Stop TB Strategy implies engagement of all health care institutions in TB control, which means that primary health care doctors and nurses have to strengthen their knowledge about TB.
- The Stop TB Strategy promotes active community participation in TB control.
- The Stop TB Strategy emphasizes problems of vulnerable groups (including PWUD) as requiring special measures and response.
- A fundamental change between the 1990s DOTS Strategy and the 2006 Stop TB Strategy is the enhancement of the concept of patient-centred care for all individuals with TB. (Based on: The Global Plan to STOP TB 2011-2015. For more information see Annex 2.)

Show Slide 1.11 (DOTS Strategy) and Slide 1.12 (DOTS Strategy Components)

DOTS Strategy Components
1. Sustained political and financial commitment
2. Diagnosis by quality-assured sputum smear microscopy
3. Standardized short-course anti-TB treatment (SCC) given under direct and supportive observation (DOT)
4. A regular, uninterrupted supply of high-quality anti-TB drugs
5. Standardized recording and reporting

http://www.who.int/tb/dots/ru/ WHO website
**Supporting content:**

An internationally recommended TB control strategy, later named DOTS (Directly Observed Treatment Short course) was launched in 1994. Its important component is Directly Observed Treatment (DOT) for TB means that a trained health care worker or other designated individual watches the patient swallow every dose of the prescribed TB drugs. DOT helps ensure that the patient takes the right drugs at the right time for the full duration of treatment. It was originally developed as a public health approach to control TB in resource-limited settings and has been recognized as a highly efficient and cost-effective.

The DOTS Strategy includes following components:

1. **Secure political commitment, with adequate and sustained financing**
   
   Political commitment is the foundation of the strategy. One indicator of political commitment is the percentage of funding for TB control that is provided from domestic sources.

2. **Ensure early case detection and diagnosis through quality-assured bacteriology**
   
   Initially, great emphasis was given to diagnosis of the most infectious cases of TB (i.e. sputum smear-positive cases of pulmonary TB), detected using sputum smear microscopy. More recently, there has been increasing emphasis on the role of diagnosis based on culture and molecular tests as well as smears.

3. **Provide standardized treatment with supervision, and patient support**
   
   The recommended treatment for drug-susceptible TB is a short-course (six months) regimen of four drugs: isoniazid and rifampicin, the two most powerful first-line anti-TB drugs, plus pyrazinamide and ethambutol. For patients with drug-susceptible TB, these regimens will cure around 90% of TB cases when treatment is fully adhered to and drugs are quality-assured. Treatment and patient support can usually be provided on an outpatient basis, with no need for hospital admission, within general primary health care services.

4. **Ensure effective drug supply and management.**

5. **Monitor and evaluate performance and impact.** Routine monitoring of the performance of TB control is crucial. The main indicators to monitor DOTS implementation are the number of cases diagnosed and notified, and the percentage of patients who are successfully treated. (Source: STOP TB PLAN 2011–2015, WHO, 2011. For more information see Annex 2.)

**Questions for group discussion** (can be done in two groups with presentations and plenary at the end – 10 minutes):

- What are the advantages and disadvantages of smear microscopy, and why is this method recommended by WHO?
- What are the advantages and disadvantages of outpatient TB treatment?
- What are the advantages and disadvantages of standardized treatment?

**Conclusions:**

The DOTS Strategy, regardless of its evidence-based effectiveness, is not approved by decision-makers in EECA.

Mentioning this strategy for advocacy purposes, it is important to remember that is it not a universal method, but it is “effective in resource-limited settings”.

The DOTS Strategy implies political commitment, which means the strategy should be part of a regional package of measures for fighting TB. If a harm reduction programme implements part of the DOTS Strategy – for example, provides DOT to PWUD – it is important to make sure that this treatment is not harming the patient.
International community acknowledges the necessity of special approaches to TB control among PWUD.

Addressing vulnerability, including TB/HIV is one of the components of the Stop TB Strategy.

The main principles of providing assistance to PWUD are Justice, Access to services, Public health and Harm reduction.

DOTS strategy still is questioned in the countries of EECA, regardless of the strategy’s proven efficiency and effectiveness in TB control.

End of Module 1.
**MODULE 2: APPROACHES FOR PROVIDING TB SERVICES FOR PWID IN LOW-THRESHOLD AND HARM REDUCTION PROGRAMMES, INTEGRATION OF LOW-THRESHOLD PROGRAMMES WITH OFFICIAL HEALTH CARE, EXAMPLES OF GOOD PRACTICES**

**Module Goal:** To provide participants with the necessary information and skills to include TB services in low-threshold programmes for PWUD.

**Learning Objectives:** By the end of the sessions, participants will be able to:
- summarize current services needed for PWUD, with reference of their effectiveness;
- discuss possible complex approaches to TB intervention for PWUD; and
- design effective TB prevention programmes appropriate for the specific region.

**Thematic topics covered:**
- Main problems in TB control among PWUD
- Providing TB testing and risk assessment in low-threshold programmes, with examples of good practices
- TB treatment – social support for PWUD who are not in clinic (DOTS and its elements) – good practices
- Inpatient TB treatment – possibilities of introducing low-threshold programmes
- Informing PWUD about TB.

**Materials and resources required for the session delivery:**
- Laptop

**Time required for the session delivery:** 185 minutes

*Show and talk to Slide2.1, S2.2 (Module 2: Approaches for Providing TB Services for PWUD in Low-Threshold Programmes) outlining the module:*
TOPIC 1: MAIN GOALS OF TB CONTROL AMONG PWUD

Activity: Group discussion and sub-groups work
Section Time: Approximately 65 minutes

Group work (30 minutes):
Three sub-groups work on the assignment:
What are the main problems of TB control among PWUD during diagnostics, treatment and prevention?

Show Slide2.3 (Group Work)

Supporting content:
Depending on the region, the list of problems can be different. It is recommended that the facilitator study the situation beforehand to be able to contribute to the group work by participants.
A tentative list of problems is:

During diagnostics:
• Difficult access to diagnostics due to marginalization and lack of patient-friendly services
• If the person is using drugs actively or is HIV-positive, TB symptoms may be hard to recognize (fever, night sweats, weight loss)
• Diagnostics take a long time and require several visits to a health care facility – PWUD get ‘lost’ before finishing diagnostics
• Insufficient training of specialists who diagnose PWUD, especially regarding diagnosing TB in HIV-positive patients
• Using chest x-ray often gives results which are not reliable and need to be confirmed
• Sometimes diagnostic services are not provided free of charge
• In case of confirmation of TB disease there is an increased likelihood of discrimination – for instance, refusal to receive treatment in substance-dependence treatment clinic, which forces patients to hide their diagnosis or refuse to be diagnosed
• Lack of access to drug susceptibility testing
• TB testing is not a priority in primary health care and substance-dependence treatment services, which means opportunities for testing PWUD for TB are not always utilized
• No testing or insufficient testing in penitentiaries.
**During treatment:**
- Long treatment duration, especially if it involves hospitalization; PWUD leave inpatient facilities without finishing the course of treatment
- Very low integration of services for patients with HIV, TB and drug dependency
- Absence or lack of substance-dependence treatment services at infectious diseases or TB hospitals
- In the countries where there is substitution therapy, often it is not provided in TB hospitals
- Patients are lost to follow-up when they move to other cities, are incarcerated or released from incarceration
- Outpatient services for PWUD are not developed; after leaving an inpatient facility, they stop treatment
- TB specialists are not qualified to work with PWUD
- Narrow range of psychosocial assistance, especially to patients who are TB/HIV co-infected, such as palliative care
- Lack of DOTS
- Lack of second-line drugs to treat MDR-TB
- Lack of specialists working in prisons who are sufficiently trained to treat TB and TB/HIV.


**During prevention:**
- Lack of knowledge about TB among PWUD
- Stigmatization and discrimination against PWUD who have TB (some studies show that there is considerably more discrimination against PWUD with TB disease than against PWUD who are HIV-positive)
- TB prevention among PWUD is insufficient: they are not covered by general preventive activities, and the coverage by low-threshold programmes remains very low
- ART coverage among HIV-positive PWUD is lower than among PLHIV in general, whereas ART is a means of prevention of TB among PLHIV
- IPT coverage among HIV-positive PWUD is low; there is high default rate and no DOT for IPT.

**TOPIC 2: PROVIDING TB TESTING AND RISK-ASSESSMENT IN LOW-THRESHOLD PROGRAMMES**

**Activities:** Presentation, group work

**Section Time:** 15 minutes

**Practical work 'TV commercial':** In small groups participants prepare a TV commercial (presentation) about each TB testing method (based on the information from the TB Literacy sessions), trying to present full information on the selected testing method. The other groups ask questions.

*Show and talk to Slide2.3 (TB Testing Methods)*
TB Testing Methods

- Mantoux TST
- Chest x-ray
- Sputum culture
- Sputum smear microscopy
- Interferon gamma release assays (IGRAs)
- ?????
- ?????

Supporting content:
Using the slide, remind the participants about the ways to test for TB infection and TB disease
Ask the group:
- Which diagnostic methods are most commonly used in your region?
- Which method of TB diagnostics is recommended as part of the DOTS Strategy, and why?
  (Answer: sputum microscopy, because it identifies patients with active pulmonary TB disease.)
- What methods are ineffective applied to PLHIV and why?
  (Answer: relying on chest x-ray only, because PLHIV often develop extrapulmonary TB or have no abnormalities showing on chest x-ray. TST result can be negative in individuals with low CD4 cell count because the immune system is suppressed and cannot mount a positive skin test reaction.)

Supporting content:
Methods to use in screening for latent or current TB disease depend on the epidemiological situation in the country/setting and among PWID with regard to TB and HIV infection. In addition, screening methods depend on the presence of any symptoms of TB disease. Ideally, all PWUD should be screened for TB disease or for LTBI. Sputum smear microscopy, culture and chest x-ray should be used in all European countries and in PWUD with symptoms or signs of TB disease. Initially, PWUD should complete a questionnaire and have a clinical examination to identify the presence of signs and symptoms. (For more information, use materials from the Module ‘TB Literacy’ and see Annex 3.)

Show and talk to Slide2.4 (Before Starting, Make Sure That...)

Before Starting, Make Sure That...

- the diagnostic method is effective and suitable to the target group and is in accordance with the existing country guidelines;
- infection control measures are in place, safeguarding the staff as well as other clients;
- staff have the knowledge and skills to use the selected diagnostic method; and
- there is a referral system, and clients can be sent to health care facilities if additional testing or treatment are required.
**Practical work** (20 minutes): Form four small groups for the exercise. Ask participants to brainstorm on what activities will make sure that all four points mentioned on the slide are adhered to (diagnostic method, infection control, staff training, referral system). Results are presented and discussed in plenary.

Any testing and/or examination should be carried out with the consent of the client and should be accompanied by pre-test counselling. As with HIV, with TB testing the counselling promotes confidence and trust-based relations with the client, increases the client’s awareness, transforms risk behaviour and forms the client’s adherence to the treatment in the case of a positive test result.

*Show and talk to Slide2.5 (Pre-Test Counselling)*

**Pre-Test Counselling**

- the reason why testing is recommended;
- what will be tested;
- client has the right to refuse the test, and it will not affect the client’s access to services;
- clinical benefits of testing with regard to treatment possibilities;
- test results will be treated confidentially; and
- positive test may make it necessary to inform partners or others (contact tracing) – in some countries this may be mandatory, and the client must be informed of the existence of any such legislation.

Source: Guidelines for testing HIV, viral hepatitis and other infections in injecting drug users, EMCDDA, 2010

**Practical work** (30 minutes): Participants work in pairs (or groups of three where one plays the role of an observer) and provide pre-test TB counselling. The facilitator can prepare concrete descriptions for the role play (e.g. counselling for pregnant women or people released from prison).

**Supporting content:**

Having the possibility for testing in low-threshold programmes does not mean that this testing will be requested. Many studies show that people often do not want to know their diagnosis, be it TB, HIV or another disease. Large numbers of people who have been tested do not return to collect results. One of the reasons is the lack of or incorrectly provided pre-test counselling.

When recommending HIV testing and counselling, service providers should always aim to do what is in the best interests of the individual patient. This requires giving individuals sufficient information to make an informed and voluntary decision to be tested, maintaining patient confidentiality, performing post-test counselling and making referrals to appropriate services. *(Source: Guidance on provider-initiated HIV testing and counselling in health facilities, WHO, 2007.)*
Show and talk to Slide 2.6 (Testing for TB in Low-Threshold Centre in Tomsk)

Low-Threshold Medical-Social Centre ‘Our Clinic’ (Tomsk, Russia)

During syringe exchange and outreach visits, trained consultants conduct:
- Symptoms and disease history, including information about social, marital and professional status of a client and if the client had any contacts with a person with the disease
- Motivational consultation to continue testing
- Sputum collection for microscopy
- Referral to TB facility for fluorography

TOPIC 3: PARTICIPATION OF LOW THRESHOLD PROGRAMMES IN TB TREATMENT IN INPATIENT FACILITIES

Activity: Group work
Time: 35 minutes

Practical work (15 minutes): Participants are split into two groups. Using already identified problems during treatment, answer the following questions:
Group 1: What services can an NGO provide at outpatient TB treatment facilities?
Group 2: What services can an NGO provide at inpatient TB treatment facilities?

Show and talk to Slide 2.7 (Services for PWUD in Inpatient Facilities)

Services for PWUD in Inpatient Facilities

- Psychological support
- Peer consultations
- Self-help groups
- ‘Patients’ School’
- Consultations regarding dependence
- Social assistance
- Forming treatment adherence
- Training of inpatient facility staff on the principles of working with PWUD and tolerance towards PWUD
- Burnout prevention for inpatient facility staff
- Other kinds of assistance

Interactive discussion (10 minutes):
Main problems of TB treatment in inpatient facilities:
- Long duration of hospitalization has a negative psychological impact on the patients (feeling depressed, lonely, bored)
- Patients who use illicit drugs also need substance-dependence treatment, or at least measures to decrease withdrawal symptoms
- Strong side effects of TB drugs have physical and psychological impacts and negatively influence treatment adherence
Staff members of TB hospitals, especially nurses and auxiliary staff, often have a negative attitude towards patients who are PWUD and stigmatize them.

TB/HIV co-infected PWUD are often admitted to TB hospitals in a critical physical condition in addition to a fragile psychological state and in social isolation, which leads to low motivation as regards treatment adherence and the desire to use illicit drugs.

What can help?

- Different kinds of drug rehabilitation services in TB hospitals: effective relief of withdrawal symptoms, OST (where available), psychological support and motivation to stop drug use (peer counselling, Narcotics Anonymous groups, specialist consultations), professional psychological help
- Training and education for hospital staff: special skills for working with patients who use illicit drugs, tolerance of patients, burnout prevention
- Comprehensive psychosocial support during inpatient TB treatment: support groups, group psychotherapy, social skills building, social support
- Individual and group consultation of patients regarding different aspects of TB treatment (patients’ schools): forming a responsible attitude towards treatment. *(Source: Low threshold model to TB prevention and treatment. Working document. Dasha Ocheret, Masha Kharchenko.)*

**Case-study (15 minutes):** Give participants the document ‘Best Practices. Saint Petersburg’ *(Annex 4)* and let them read it. Then facilitate the discussion.

**Discussion questions:**

- Do you think it will be feasible to implement a similar programme in your city?
- What do you think were the main challenges faced by the staff members of the foundations, and how they were overcome?

*Show and talk to Slide2.8 (Conclusions)*

**Conclusions**

- Prolonged treatment of PWUD in inpatient facility can be difficult for them and result in discontinuation of treatment.
- Psychological support in inpatient facilities helps considerably in reducing the number of treatment defaults (refusals to be treated).
- Psychosocial assistance in inpatient facilities can be organized at low additional cost.
- Substance-dependence treatment and services at TB inpatient facility can encounter many obstacles and should be one of the advocacy goals.
TOPIC 4: PARTICIPATION OF LOW-THRESHOLD PROGRAMMES IN OUTPATIENT TB TREATMENT

Activity: Group work, presentation
Time: 20 minutes + 30 minutes (including exercises on forming adherence)

Game: To the barrier! (10 minutes). Skills which you will develop during this game can be used to better understand your opponents. They are useful for building long-term partnerships, advocacy and for conducting negotiations.

The group is split into two teams: the proponents and the opponents of reducing the duration of hospitalization. Regardless of their actual opinion, all game players have to advocate for the opinion of the team to which they belong. The teams are lined up along the border (which can be made by fastening a strip of tape on the floor) and voice their arguments after having discussed them with the team.

Show and talk to Slide2.9 (Inpatient TB Treatment: Pros and Cons) and Slide2.10 (Outpatient Services for PWUD):

Supporting content:
Regardless of the WHO’s recommendation to minimize hospitalization, many countries still practise a prolonged (six months) inpatient TB treatment. In the case of PLHIV who have TB, hospitalization is even longer. This is because, to reduce the duration of treatment in inpatient facilities, it is necessary to have a developed outpatient service (in Russia, TB dispensaries) which could take over and monitor treatment of patients who are discharged from TB hospitals and continue treatment as outpatients.

Treatment adherence for outpatients prevents the development of drug resistance and is a prerequisite to complete cure. The main challenge of outpatient treatment, in comparison to inpatient treatment, is treatment control. Many patients who use illicit drugs default during outpatient treatment. DOTS would have helped to reduce the number of defaults at this stage. The main challenge of DOT is the accessibility of PWUD to the health care workers of outpatient TB facilities. This problem can be solved by involving the staff of low-threshold programmes in DOT. Staff of low-threshold programmes have access to PWUD and have the skills to maintain contact with PWUD.

Some kinds of outpatient treatment of PWUD can be implemented on the basis of existing activities conducted in the communities: self-help groups of PLHIV, Narcotics Anonymous groups, patients’ schools of PLHIV, and similar groups. The availability of anti-TB drugs and testing at a convenient time and constructive communication between staff and clients are important; therefore, it is important to establish and maintain a close connection with medical outpatient institutions (in Russia, TB dispensaries). This requires initial staff training and coordination work at the start of such collaboration. Experience shows that many dispensaries are interested in this kind of collaboration, because they too believe that it...
can reduce the percentage of treatment defaults and improve adherence. Staff members of outpatient TB facilities are also in need of burnout prevention measures. Case management and social accompaniment can be a function of state institutions, if there is such an agreement, and if their staff members are trained to work with PWUD. In Russia this is especially relevant for mothers with children and disabled persons – these groups are considered priorities by the state social services.

Show and talk to Slide2.11 (Participation of Low-Threshold Programme Staff in DOT) and Slide2.12 (Best Practice: Kaliningrad):

### Participation of Low-Threshold Programme Staff in DOT:
1. Consultants and case managers work in TB hospitals to identify patients who need accompaniment
2. DOT at stationary and mobile syringe and needle exchange points
3. Home visits to provide DOT to patients who are otherwise non-adherent

**Resources needed:**
- (A) Development of necessary patient management protocols
- (B) Inclusion of harm reduction programme staff in multi-disciplinary teams working at TB hospitals
- (C) Training of harm reduction programme staff.

**Source:** Low threshold model to TB prevention and treatment. Working document. Dasha Ocheret, Masha Kharchenko.

### Best practice: Kaliningrad

**Responsibilities of a social worker:**
- Treatment control by means of meetings or phone calls to the clients
- If necessary, collecting anti-TB drugs at the TB dispensary and handing them over to the clients
- Personally accompanying clients to testing, to monitor treatment effectiveness
- Work with the client's family: emotional support, DOT training, information about infection control.

**Mobile team:** conducts home visits, delivers medicines, gives consultations regarding treatment, adherence and side effects.

A short presentation can be made and an exercise about developing adherence (30 minutes). Use developing ART adherence materials.

Show and talk to Slide2.13 (Outpatient TB Treatment: Conclusions)

### Outpatient TB Treatment: Conclusions
- Outpatient TB treatment of PWUD is challenging but feasible.
- Well-developed outpatient treatment – dispensaries, primary health care doctors, infectious disease specialists – is a prerequisite for decreasing the duration of inpatient treatment.
- Community and NGOs can provide considerable support to TB outpatients.
- Introducing DOT is one of the advocacy objectives which requires attracting additional partners and resources.
TOPIC 5: TB PREVENTION IN LOW-THRESHOLD PROGRAMMES. INFORMING

Activity: Presentation and group exercise
Time: 35 minutes

Presentation: 10 minutes
Show and talk to Slide 2.14 (Three I’s for HIV/TB)

Supporting content:
Intensify TB case-finding: Screening for symptoms and signs of TB in places where HIV-infected people are concentrated, followed by diagnosis and prompt treatment, increases chances of survival, improves quality of life and reduces transmission.
Many organizations and medical institutions report that diagnosing TB in PLHIV is usually at late stages of the disease when the symptoms are already hard to ignore. This happens also when patients know that they are HIV-positive but do not come for additional testing and do not receive ART. According to the data collected by Saint Petersburg’s TB service in 2011 among new TB cases, only 8% of them had regular monitoring visits to an AIDS centre. Because of this, when TB is diagnosed, the share of patients already receiving ART is very low: in 2011 it was only 5%.

Introduce Isoniazid prevention therapy (IPT): Isoniazid is a drug given to people with LTBI to prevent progression to active TB disease. HIV programmes should provide IPT for people living with HIV, provided the patient does not have TB disease. IPT can be used with antiretroviral drugs. Remind the group about IPT, and exercises which they already did during this training.

Ensure TB Infection control in health care and congregate settings: TB transmission occurs where people with TB and HIV are crowded together, such as in hospital wards, prisons or military barracks. Such facilities must have TB infection control plans (supported by all stakeholders) that include administrative, environmental and personal protection measures to reduce transmission. Remind the group about infection control, and exercises which they already did during this training.

Practical work (25 minutes):
Community TB awareness. Information materials.
One of the goals of TB prevention is informing the community about TB and raising community awareness. This goal can be achieved by various means, the main ones being: distributing printed materials, group and individual consultations, information distributed via social networks and community links. Any of the abovementioned methods requires certain adjustment of the content/information.
This exercise is to understand what information should be included in a leaflet or brochure about TB. It will also allow the participants to practise working with focus groups. A focus group is a method widely used during situation assessments and problem identification.

One of the participants is a facilitator of a focus group. If the group is large, there are two trainers and there is available space, two focus groups can be formed. Each focus group receives two (actual) brochures about TB for PWUD and has 15 minutes to discuss their content.

*Show and talk to Slide2.15 (Printed Materials)*

**Printed Materials**

- Is the information sufficient and reliable?
- Is the information understandable?
- Is the information suitable for the needs of the target audience?

*Supporting content:*

Piloting of the printed materials using focus groups is very useful and allows the materials to be adjusted to really suit the needs of the target audience.

**Discussion questions:**

- What information about TB is the most important for communities of PWUD?
- What information can be communicated in print, and what information should be told in person?
- What should the communication style be?
- Where (in what locations) is distributing TB leaflets the most effective?

*Show and talk to Slide2.16 (Module 2: Learning Points)*

**Learning Points**

- Harm reduction programmes can be effective in prevention, case-finding and treatment of TB in PWUD.
- Harm reduction programme functions can include:
  - Providing access to the target group
  - Raising awareness of the target group
  - Psychosocial support
  - Training of health care workers
- International standards of TB prevention and treatment acknowledge the necessity to implement TB services in low-threshold programmes for PWUD
- Introducing certain services (e.g. substance-dependence treatment) for PWUD first requires advocacy

*End of Module 2*
MODULE 3: ROLE AND INVOLVEMENT OF THE PWUD COMMUNITY IN TB PREVENTION AND TREATMENT

Module Goal: To consider the importance of the PWUD community’s involvement and its role influencing TB service delivery.

Learning Objectives: By the end of the sessions, participants will be able to:
● evaluate the role of grassroots community involvement in service delivery; and
● discuss opportunities to empower community representatives to influence service delivery.

Thematic topics covered:
● International recommendations and policies for community participation in TB testing and treatment
● Community mobilization in TB control – main strategies and how they can be implemented
● Main tasks in TB prevention and treatment which can be addressed by the community
● Opportunities to build sustainable community participation in TB prevention and care programmes
● Examples of good practices of community participation in TB service delivery.

Materials and resources required for the session delivery:
● Laptop

Time required for the module delivery: 50 minutes

Show and talk to Slide3.1 (Module 3: Role and Involvement of the PWUD Community in TB Prevention and Treatment) outlining the module:
TOPIC 1: INTERNATIONAL RECOMMENDATIONS AND POLICIES FOR COMMUNITY PARTICIPATION IN TB TESTING AND TREATMENT

Activity: Group discussion and presentation
Time: 25 minutes

Group discussion and presentation (10 minutes): Start a group discussion about: What is a community? Try to receive as many answers as possible.

Show and talk to Slide 3.2 (What is a Community?):

What is a Community?
- Family
- Household
- Community of people living together or having common interests
- Community-based organizations, representing the community’s interests

Supporting content:
There are many definitions of community, and it is important to understand that communities and community-based organizations are not one and the same. A community consists of people living together in some form of social organization and cohesion. Although it may vary significantly in size and socioeconomic profile, its members usually share social, cultural and economic characteristics as well as common interests, including health.

Show and talk to Slide 3.3 (Rights and Responsibilities of a Community):

International Conference on Primary Health Care in Alma-Ata on 6–12 September 1978

“The people have the right and duty to participate individually and collectively in the planning and implementation of their health care”.

Supporting content:
Already 30 years ago, the conclusions of the historic ‘International Conference on Primary Health Care’ in Alma-Ata on 6–12 September 1978 emphasized “the importance of full and organized community participation and ultimate self-reliance with individuals, families, and communities assuming more
responsibility for their own health”. Indeed, the Declaration of Alma-Ata was very explicit: “The people have the right and duty to participate individually and collectively in the planning and implementation of their health care.” In that Declaration, the concept of primary health care as the key to accessing health for all and, thus, fostering societal development was linked for ever to that of social justice. However, during the next 20 years not very much was done to involve communities in disease control, until it became very obvious that without full participation of the community, control of such diseases as HIV, TB and Malaria is impossible. Therefore, point 5 of the STOP TB Strategy states: “Empower people with TB, and communities.” This component spells out the need to promote advocacy, communication and social mobilization to influence policy changes and sustain commitment; to facilitate community participation in TB care and to propagate the ‘Patients’ Charter for TB Care’, a series of good practice rules based on the sound principles of human rights applied to health. The first and fundamental community to which most people naturally belong is the family. Family members, and women in particular, are often the main providers of health care and have a fundamental role in health promotion. The review of community participation in TB control highlighted that a sphere of close friends and neighbours plays an important role in every person’s daily life and acts as an immediate point of reference for help and advice. (Source: Community involvement in tuberculosis care and prevention, WHO, 2008.)

Show and talk to Slide3.4 (Community Involvement (Methods)):

Community Involvement (Methods)

• Training of community representatives
• Providing the community with adequate and objective information about the situation and capacities of the partners
• Technical assistance
• Possibilities to participate in decision-making

Supporting content:

Group discussion: what does it mean ‘to involve the community’ in TB control?
The term ‘community involvement’ is generally preferred to ‘participation’ and points to the idea of partnership and shared responsibility with health services, rather than to the notion of using the community to reduce the burden on the health services. For example, involving people with TB and their communities in providing care and then failing to provide high-quality services in terms of diagnosis, drugs and follow-up would damage rather than improve any health initiative. If health services commit to delivering high-quality support but face constraints, and if people and families then assume greater responsibility for the community’s health, the strain on the health services will be mitigated. Promoting involvement is much more than simply proposing participation in services planned and designed from the outside. People with TB and their communities should be an active part of the entire process from the very start of the intervention design, contributing to defining health problems and needs, to developing solutions and to implementing and evaluating health interventions. To enable a community to be involved effectively, it is necessary to undertake a number of activities (mobilize and empower the community).
Practical work (15 minutes): Work in four groups and discuss what activities can be included under each of the bullet points?

Show and talk to Slide 3.5 (Community Involvement – in What?):

Community Involvement – in What?
Recommendations for empowering people and communities affected by TB
1. policy guidance, initial implementation and scale-up
2. advocacy and communication
3. capacity-building
4. addressing special challenges in controlling TB
5. ensuring the quality of services provided at the community level
6. budgeting and financing
7. establishing a plan for monitoring, evaluation and supervision
8. operational research.

Supporting content:
Local communities, people who are directly affected by TB and people who have had TB but have been cured should be seen as partners who can actively be involved in action against the disease. They should take meaningful involvement in design, planning, implementation and evaluation of interventions from the very start. Effective involvement does not mean simply decentralizing services into the community or providing suboptimal services for poor people and should not be based on ‘professional’ training and medicalization of laypeople. It means promoting people’s responsibility for health through health-related education, identifying problems and establishing a dialogue on possible solutions and how to put them into effect, fostering community self-reliance and ownership of health initiatives. (More information in: Community involvement in tuberculosis care and prevention. WHO, 2008, page 27.)

TOPIC 2: PWUD COMMUNITY INVOLVEMENT AND THE COMMUNITY’S OBJECTIVES IN TB CONTROL
Activity: Group work and presentation
Time: 30 minutes

Presentation: 15 minutes
Show and talk to Slide 3.6, 3.7 (Community Objectives) and Slide 3.7 (PWUD Community Involvement):

Community Objectives
• increasing TB case detection (due to improved access of the vulnerable groups to TB testing and diagnosis)
• improving treatment success, due to adherence support and increased awareness
• reducing default rates
• increasing awareness about TB in the community

PWUD Community Involvement
• Involvement of PWUD and/or PLHIV communities is necessary and is an important, but not the only, condition of programme success
• Types and degrees of involvement can vary
• In EECA there are networks and grassroots organizations of PWUD and PLHIV which already have experience working in TB
• Involving active PWUD requires a good understanding of their capacity and of the challenges related to their involvement
Supporting content:
The mobilization and involvement of PWUD in TB control activities presents certain challenges. The PWUD community is often not organized, unstable and sometimes lacks leadership. To make the community an active participant in planning and implementing services, instead of a passive ‘service recipient’, the community needs to be mobilized to solve its own problems. This requires high-level recognition of the roles of the communities in public health and of the importance of building up their capacity. Community involvement (especially of active PWUD) has its limitations, but nonetheless such involvement is feasible.

Show and talk to Slide 3.8 (Community Involvement Strategy):

Community Involvement Strategy

- Local community analysis
- Informing community members, raising their awareness about TB
- Involving community representatives in TB control among PWUD
- Training community representatives on the subjects of TB prevention and control
- Ensuring community representatives’ participation in advocacy campaigns

Supporting content:
Community analysis: It is important to approach the wide local PWUD community. Pay special attention to other communities which can be related to PWUD, such as PLHIV, ex-prisoners, drug rehabilitation clients, commercial sex workers and others. It is important to remember that relatives of PWUD and specialists who assist PWUD can also be considered part of the community.

Informing: Informing PWUD about TB is not only to increase their knowledge about the disease and ways of prevention, but also to inform them about the problems of TB in the wider community. What is the cause of low case-finding in the community? What are the challenges faced by PWUD who are on TB treatment? Who is responsible for an uninterruptede supply of TB drugs? How can community representatives influence the situation?

Involving community representatives in TB control: Unfortunately, there is very scarce information about involving the PWUD in community TB control; however, we can focus on:

Show and talk to Slide 3.9 (Involving PWUD in Community TB Control):
Involving PWUD in Community TB Control

- Monitoring and evaluation of the quality of services
- Access to vulnerable and marginalized groups and groups with special needs (outreach, peer consultations, awareness building)
- Advocacy, mobilization
- Feedback from the community and patients to health care services.

Supporting content:
There are regular studies about TB in vulnerable groups; NGOs are often involved in the studies. Involving PWUD in such studies demonstrates an attitude of respect and attention. It shows motivation to engage PWUD in a situation assessment, and it shows interest in the experience, which PWUD can share. Monitoring of quality control, accessibility of services, availability of anti-TB drugs and project implementation can be done by the community regularly. An effective community feedback system through NGOs will allow quick adjustments to any changes. Taking into account the community’s opinions and responding to their needs are already factors of mobilization and motivation. Starting by involving PWUD in monitoring will allow them to be engaged later on in activity planning. Outreach activities using active PWUD are often used by harm reduction programmes. Outreach staff are involved in needle and syringe exchange, distribute prevention materials, allow access of the programme to the most difficult locations (‘drug dens’) and are a link between the programmes and PWUD. At the start of TB control programme, a situation analysis should show which areas have not yet been covered and need to be covered by outreach and prevention interventions. Such areas or physical locations can include shelters (homeless people are one of the high-risk groups for TB), support groups to ex-prisoners, prisons and living quarters where a lot of migrants reside.

Group discussion: What kinds of outreach activities can you recommend to increase access to TB services?
Peer counselling is an acknowledged tool of community work. In fact, there is a continuous experience exchange inside the community, regardless of whether it is promoted, for example, by an NGO or not. Community mobilization can include training on the basic principles of peer counselling, identifying the benefits of this activity and any possible negative impacts.

Practical work (15 minutes): Four volunteers are selected. They work in pairs for five minutes and prepare a performance (‘drama’) entitled ‘tell me about your own TB treatment’. One pair will demonstrate to the group what they think is a ‘positive, useful’ story, and the other ‘negative, harmful’. After the performances the group discusses the advantages and disadvantages of peer counselling.

Show and talk to Slide 3.10 (Advantages and Disadvantages of Peer Counselling):
Peer Counselling

- Advantages:
  - Easy to understand
  - Easy to establish contact
  - Trust
  - Knowing the problem from within, including details which are usually not discussed
  - Motivation (they could do it, so I can also do it)

- Disadvantages:
  - Information can be distorted
  - Information depends on the perception of the peer counsellor
  - Facts can be misinterpreted
  - Discouragement (they could not do it, so I cannot do it either)

Show and talk to Slide 3.11 (Learning Points):

Learning Points

- Community involvement required active community mobilization, organizational support and training

- Community involvement promotes active case finding, improves treatment adherence, reduces the number of defaults and increases community awareness

End of Module 3
MODULE 4: MAIN CHALLENGES THAT CAN BE ENCOUNTERED AND HOW THEY CAN BE ADDRESSED

Modules Goal: To review and classify the main challenges for TB service for PWUD and discuss possible opportunities to address these challenges.

Learning Objectives: by the end of the sessions, participants will be able to:

- define and classify certain obstacles for integration of TB and substance-dependence treatment and services;
- evaluate possible actions to overcome these obstacles and achieve improvements; and
- develop a specific action to improve the service.

Thematic topics covered:

- ‘Personal’ challenges – lack of motivation, risk behaviour, lack of information etc. – and effective ways to address them
- ‘Organizational’ challenges – lack of effective services, poor connection between organizations and services etc. – and how to address them
- ‘System’ challenges.

Time required for the module delivery: 60 minutes.

Show and talk to Slide 4.1 (Module 4 – Outline):
TOPIC 1: PERSONAL PROBLEMS RELATED TO WORKING WITH PWUD

Activity: Group discussion
Time: 15 minutes

What personal problems related to the use of injecting drugs especially influence the possibility of preventive activities among PWUD?

Show and talk to Slide 4.2 (Main Challenges in Working with PWUD):

- Care about own health is not always a priority for people with substance dependence
- Self-discrimination and self-stigmatization
- Challenges in maintaining long-term contact
- Risk-taking behaviour (parasuicidal behaviour)
- Lack of support from family or friends
- Low socialization (difficulties in interacting with institutions and society)
- Suspicion, lack of trust
- Psychological problems: depression, anxiety, abrupt changes in general condition, related to using drugs or a withdrawal syndrome

Supporting content:

Not for the facilitator: discussing this subject is a sensitive issue. If there are PWUD in the group, they might take this personally. It should be emphasized that these are common problems, but it does not mean that everyone encounters them. In fact, some PWUD are very social, motivated for treatment and do not have trust issues, in which case prevention activities are much easier for them.

Although there have not been large-scale studies on this subject, we can say that many PWUD who encountered problems with TB have a long history of injecting drug use. A long history of drug use often leads to certain changes in people’s psychological state and behaviour, especially in countries where there is no effective treatment, social and psychological assistance or drug rehabilitation, alongside repressive measures and attitudes towards PWUD. This does not mean that people with substance dependence cannot take care of themselves or take responsibility for their own and other people’s health. This means that the psychological state and behaviour of these people need special attention.

Often the presence of the abovementioned challenges becomes a reason to refuse to work with PWUD (for instance, by state health care institutions). What can be of help in working with PWUD?
**What To Do?**

- Apply philosophy and principles of harm reduction
- Leave the idea of fully changing PWUD; realize own limitations
- Use the services of professionals (psychologists, social workers)
- Prevent burnout (not only in programmes, but also in state institutions)
- Involve people who have personal experience of drug use
- Other ideas?

**Organizational Challenges**

- Virtually no institutions offer integrated TB, substance-dependence and/or HIV services
- PWUD are not considered a high TB risk group; there are no special prevention activities
- TB doctors do not have sufficient training to work with PWUD (and PWUD/PLHIV)
- No joint planning of TB control, substance-dependence and HIV services
- No studies about TB prevalence among PWUD (and other TB-related problems among PWUD)

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**Supporting content:**

TB among PWUD is a relatively new problem, and until recently it was not receiving sufficient attention. Even now in most regions of Russia this problem is ignored. TB among alcohol abusers, for instance, is considered much more important. Although the need for service integration between TB, HIV and substance-dependence services is recognized in all international documents, in fact this process is very slow. In countries of the former Soviet Union the system of care, document-processing and related procedures have not changed in decades; therefore, it is not realistic to expect that a change will happen overnight. One of the reasons why coordination is lacking is the absence of political commitment, which is required for any large-scale changes in state health care. This is another subject for advocacy. However, there are success stories of TB testing and treatment among PWUD in the region, where different services collaborate at local, municipal or provincial level. One such example is from Saint Petersburg (see Annex 4).

**Stigma and discrimination**

Discrimination against TB patients is a huge problem encountered in working with PWUD. Although there are no special studies on this subject, information received from the coordinators of the regional and local projects indicates that PWUD who have TB are discriminated against, not only by state institutions, but also by other PWUD. Lack of information about TB is a possible contributing factor, since PWUD practically have no knowledge about TB, whereas they already have sufficient knowledge about, for example, HIV/AIDS. In addition, in many communities, TB is associated with prisons. Not only PWUD but the health care workers themselves often do not know the difference between smear-positive and smear-negative TB patients. Another factor which contributes to the discrimination against PWUD with TB is that most medical and social institutions have limited possibilities to provide services to TB patients, due to regulations and a lack of infection control measures. This applies to substance-dependence hospitals and drug rehabilitation centres, social centres and sanatoria. There are virtually no social institutions where TB patients can receive substance-dependence treatment. The questions about difficulties faced by TB patients in medical and social support institutions and their difficulties related to entering into employment have not been thoroughly studied and require attention. Here an additional presentation and exercises can be made about preventing stigma and discrimination. Use developing materials for preventing stigma and discrimination among PLHIV.
PART III - TB ADVOCACY for PWUD (Maria Kharchenko)

MODULE 1: PERFORMING A SITUATION ASSESSMENT IN TB/HIV-RELATED ISSUES

Module Goal: To give training participants knowledge about situation assessment strategies and techniques and develop their situation assessment skills.

Learning Objectives: By the end of the module, participants will be able to:
• conduct a rapid assessment of TB testing and treatment accessibility and quality;
• find key informants and reliable information sources; and
• assess the feasibility of different programmes of TB testing and treatment for PWUD.

Thematic topics covered:
• What is a rapid assessment?
• What can be assessed?
• Key information sources
• Using rapid assessment results for advocacy.

Materials and resources required for the session delivery:
• Laptop, projector

Time required for the module delivery: 80 minutes

Show and talk to Slide A1.1 (Module 1: TB/HIV among PWUD Situation Assessment) outlining the module:
TOPIC 1. WHAT IS RAPID ASSESSMENT?

Activity: Lecture presentation
Section Time: 15–20 minutes

Show Slide A1.2 (Rapid Assessment):

Rapid Assessment

- From the 1990s
- Recommendations of WHO, EMCDDA, UNAIDS, UNICEF
- Usually applicable to sexual behaviour, addictive behaviour and HIV infection
- Lack of single definition
- Lack of single methodology

Supporting content:
Rapid situation assessment (RSA) has been used since the 1990s to assess the situation of and plan activities in harm reduction programmes and other HIV prevention projects. RSA was developed in response to rapid changes in situation, including HIV epidemic and changes in substance dependence. These changes required immediate interventions, and it was not feasible to conduct thorough research to create such interventions. The main objective of rapid assessment is to support the planning of interventions. A substance abuse programme, conducted by WHO in cooperation with UNAIDS and the Centre for Research on Drugs and Health Behaviour, University of London, followed by many other international agencies addressing HIV/AIDS, developed rapid assessment and response guidelines. The guidelines cover different areas such as sexual behaviour, drug use and other types of risky and addictive behaviours. Rapid assessment does not have a clear-cut definition or one methodology, which makes rapid assessment unique and gives it flexibility to be used for different purposes. Several definitions of RSA include:

- **RSA is a means for depicting the extent and nature of social and health problems and for suggesting ways in which they may be improved.**

- **RSA encompasses both an assessment of the problem (sometimes called ‘needs assessment’), and an assessment of the resources required to address the problem (sometimes called ‘resource assessment’). Local rapid assessments will need to assess the extent and nature of adverse health consequences related to substance use, and the interventions and resources required to reduce these adverse health consequences.**

- **RSA is a combination of several qualitative and quantitative data collection techniques and draws on a variety of data sources with a view to arriving at an understanding of the nature, extent and trends in respect of certain health and social problems (such as drug abuse) and of structures and services that exist, or do not exist, to address those problems, and then developing ways to respond to and deal with them.**
**Principles of RSA**

- First step to developing an intervention
- Two main types of variables are assessed: **problem areas** and **available resources**
- Community involvement
- Low time investment (up to 2 months)
- Using existing information
- Using several data collection methods and information sources
- Ethical considerations

**Supporting content:**
The main principle of RSA is *practical application*. Only the data useful for intervention planning are studied.

Example: When assessing PWUD behaviour in relation to TB testing, we do not only assess the ‘percentage of PWUD tested for TB in 2011’ but also ‘the reason why testing was not sought by PWUD’. Knowing the reasons will help us plan activities to increase the percentage of PWUD who come for TB testing.

Alongside *problem* assessment, it is necessary to assess the **resources required to solve the problems**. For instance, if assessment showed that the main reason for refusing treatment in a TB hospital is lack of substance-dependence treatment, then the main question is ‘What resources do we have to implement substance-dependence services in a particular TB facility?’. When assessing the resources, we consider partners who are willing to collaborate, past experience of implementing similar innovations, and related legislation. An outcome of this assessment could be to acknowledge that we do not currently have sufficient resources to implement substance-dependence services in TB facilities. Alternative solutions which can be implemented, given the existing resources, will be found.

**Community involvement** is the key to conducting rapid assessment. Community members can participate not only as informants, but can also be consulted during the planning of the assessment or when results of the assessment are interpreted. This promotes community mobilization, involving the community in activity planning and building up the community’s awareness about a particular problem.

Example: A meeting to discuss assessment results with the community representatives can serve as a starting point in involving them in a discussion of problem-solving activities. For some community members knowing the scope of the problem (for instance, that there is little knowledge about TB among the community members or misconceptions about TB among PWUD) can motivate them to start sharing the correct information. Community members can provide feedback based on their own experience about how effective and attractive the planned activities are and what the chance is of successfully reaching the objectives.

**Using existing information:** Rapid assessment does not imply collecting a lot of new information; usually there is neither time nor resources available to do it. Often the main task is to study already available information about a particular subject, and collecting any missing data. A common problem is that during the planning of advocacy campaigns, existing data are not taken into account or time and effort are spent to gather information which had previously been gathered by other projects and researchers. Approaching partners for information can be the first step in discussing problems and creating coalitions.
Example: During the creation of this training module, the authors approached several organizations working in Russia in TB service delivery and advocacy. It turned out that some of these organizations are involved in similar activities without knowing about each other’s results.

Ethical considerations: Involving community representatives requires paying special attention to confidentiality and ethics. Confidentiality is also important in working with state employees and health care workers. Revealing information which is not publicized or is even withheld from the public, which often happens regarding TB, can cause problems for these people. Therefore confidentiality, may be of paramount importance to them.

Show Slide A1.4 (Goal of RSA):

Goal of RSA
To obtain information about TB control among PWUD to develop advocacy objectives and strategy, according to the regional specifics

TOPIC 2: MAIN SOURCES OF INFORMATION ABOUT TB
Activity: Group work and discussion
Section Time: 30 minutes

Practical work (20 minutes): Participants are split into several small groups. Each group discusses which information sources can be used in each particular situation and what information is required.
- Assessment of accessibility of TB services to active PWUD
- Assessment of accessibility of TB services to (ex-)prisoners
- Assessment of accessibility of TB services to women who use drugs

Groups present their results and discuss in plenary.

To facilitate the discussion:
- Analysis of existing legislation: what international documents can be used and where to find them?
- Which local information sources can be used?
- Who are the potential key informants?
- What expert advice is available?
- What are the main service providers (locations, institutions) to be included in the assessment?
- What information is most important for advocacy?
Show and talk Slide A1.5 (Sources of Information (Documents)) and Slide A1.6 (Using International Policies and Guidelines):

### Sources of Information (Documents)
- International and regional statistical reports, recommendations and protocols
- Available official statistics
- Mass media
- Relevant information from past assessments
- Information about preventive activities in this region
- Regional laws and regulations which may apply to preventive programmes in the region

### Using International Policies and Guidelines

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Easily accessible via internet</td>
<td>• Are not obligatory at the local level</td>
</tr>
<tr>
<td>• Impress decision-makers</td>
<td>• Are difficult to adjust to the regional context</td>
</tr>
<tr>
<td>• Based on international experience and evidence from research</td>
<td>• Give very general recommendations</td>
</tr>
<tr>
<td></td>
<td>• Are not available in local language</td>
</tr>
<tr>
<td></td>
<td>• Decision-makers may treat them with prejudice</td>
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</tbody>
</table>

### Supporting content:
International documents can and should be used in advocacy, starting from situation assessment. International recommendations can differ from what is practised locally, even if the country in question proclaims the opposite. International recommendations give benchmarks for advocacy (what we would like to achieve). International recommendations can be treated with prejudice, e.g. “DOTS is a scheme of the World Bank to earn more money.”

Show and talk to Slide A1.7 (International Policies and Guidelines)

### International Policies and Guidelines
- Policy guidelines for collaborative TB and HIV services for injecting and other drug users, WHO, UNODC, UNAIDS, 2008
- HIV/AIDS Treatment and care clinical protocols for the WHO European region, WHO, 2008
- Declaration of Commitment on HIV/AIDS, United National General Assembly, Special Session on HIV/AIDS, New York, 2001
- HIV prevention among drug users. Program document, UN, 2000
- ?

Go back to slide A1.5 (Sources of Information)

### Local documents:
At the local level there are many documents regulating TB services. Often these documents are not readily accessible, and effort should be made to obtain them (use resource groups to share experiences – how did they obtain documents?). What information can be obtained? Local documents are not only sources of information; they can help define advocacy goals. An example of such a goal might be to change the TB testing and service delivery protocol for PWUD. Local documents can give a realistic picture of how accessible TB testing and treatment is to PWUD.
When analysing the local documents and statistics, we should take into account the reliability of this information. Sometimes missing or unreliable data can surface – for instance, the actual number of PWUD in Russia is more than ten times higher than the official number.

The problem being assessed is a complex one; therefore, we should rely on various information sources: regional health services (HIV/AIDS prevention and treatment, substance-dependence services, information about infectious diseases (hepatitis, TB and HIV), toxicology services etc.), law enforcement institutions, hospitals, dispensaries and social services. 

During preparation for the training, depending on the group composition, the facilitator can make a list of documents which can be analysed in a particular region, city or country.

Information from previous assessments or research can be found on the internet, on specialized websites and websites of large organizations or agencies. Public health researchers collect interesting and useful information about PWID; sometimes it happens that such information is used only for scientific publications and not for programmatic activities. To obtain this information, the researcher or the research institution involved can be contacted directly. It is possible to approach research institutions which deal with ‘public health’ and ‘addictive behaviour’; they are likely to be involved in medical and behavioural research among vulnerable groups and the general population (see EMIS, National Scientific Center for Narcology, Russia).

Conference materials: TB is an urgent problem, and in every country a number of conferences are organized each year, some local and some international, where research results are presented along with statistics and new models of service delivery. If it is not possible to participate in the conference, materials can be requested from the conference organizers.

Analysis of mass media publications: Analysing the mass media can be an important tool in advocacy planning. Forming public opinion can be one of the advocacy objectives, and mass media is an important tool to be used. Analysis of publications can be from the point of view of the information itself (if service delivery works or does not, what problems exist) or from the point of view of public opinion about TB among PWUD. In this case it is important to analyse the style of the publications (tolerant/stigmatizing), their frequency, key messages and other factors.

Show and talk to Slide A1.8 (Key Informants)

Supporting content:
Different informants can supply information about different aspects of the existing situation; therefore, it is important to be prepared for each interview and develop a list of relevant questions. It is a common
mistake to think that rapid assessment needs to be informed by the opinions of community representatives and NGOs, and that the opinions of decision-makers and staff of state institutions are less important. Representatives of health care services, social protection and other institutions are responsible for funding and decisions related to prevention activities among the target group. Representatives of law enforcement institutions are responsible for decision-making regarding the possibility of the implementation of certain prevention activities. Depending on the group composition, emphasis could be placed on which informants can be used during the assessment and in what capacity.

**TOPIC 3. MAIN ASPECTS OF SITUATION ASSESSMENT IN TB**

**Activity:** Presentation, group discussion  
**Time:** 15 minutes

*Show and talk to* Slide A1.9, A1.10 (*General Situation in the Region 1 and 2*)

### General Situation in the Region – 1

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Interview</th>
<th>Analysis of Documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamics of TB/HIV epidemic in the region:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1) TB incidence (including among PWUD)</td>
<td>Decision-makers</td>
<td>Statistics Research or assessment results</td>
</tr>
<tr>
<td>2) TB mortality (including among PWUD and PLHIV)</td>
<td>Experts</td>
<td></td>
</tr>
<tr>
<td>3) Rate of and access to testing</td>
<td></td>
<td></td>
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<tr>
<td>4) Access to treatment and treatment coverage (especially among PWUD and HIV-positive PWUD)</td>
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</tbody>
</table>

### General Situation in the Region – 2

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Interview</th>
<th>Analysis of Documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of protocols/regulation for TB prevention and treatment:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Main target groups for prevention (including PWUD, PWUD/PLHIV)</td>
<td>Decision-makers</td>
<td>Statistics Research or assessment results</td>
</tr>
<tr>
<td>• Level and structure of financing</td>
<td>Experts</td>
<td></td>
</tr>
<tr>
<td>• Main institutions involved in prevention activities</td>
<td></td>
<td></td>
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<tr>
<td>• Availability of TB strategy (including TB among PWUD, with a regulation for TB/HIV and TB/substance-dependence)</td>
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</table>

**Supporting content:**

A situation assessment should be carried out before commencing an advocacy campaign or providing services to PWUD in the region. There is a certain similarity in the problems related to service delivery to PWUD between regions and countries, but the solutions to these problems can be very different. When evaluating the prevalence of TB in the region, we should also take into account more specific indicators such as correlation between TB and HIV, TB and drug use, and TB and imprisonment. This information will help focus our efforts on a particular target group or a specific problem. The presence or absence of special attention to an existing problem in the region is also very important for starting the advocacy process. This can be a state TB commission in the region, a special committee at a municipality, availability of a regional strategy and budget allocations, and other facts which help assess how much importance is attributed to a particular problem. Special attention should be paid to documents which facilitate/hinder access of PWUD to TB services. Often an advocacy campaign focuses on changes to such existing documents or the development of new documents. Campaigns can target testing in substance-dependence treatment or rehabilitation centres, TB testing in AIDS centres (including IGRAs or Xpert MTB/RIF assay), collaboration between TB and infectious disease services and many other areas.
Show and talk to Slide A1.11 (TB and TB/HIV Services)

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Interview</th>
<th>Analysis of documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of treatment and testing for PWUD, their quality and demand for these services</td>
<td>Decision-makers, Experts</td>
<td>Laws, regulations</td>
</tr>
<tr>
<td>Coverage of PWUD with TB services</td>
<td>Decision-makers, Experts</td>
<td>Laws, regulations</td>
</tr>
<tr>
<td>The level of knowledge, skills and attitudes of specialists to work with this particular target group and conduct activities</td>
<td>Decision-makers, Experts, Target group</td>
<td>Laws, regulations, reports and assessment/research results</td>
</tr>
<tr>
<td>Assessment of accessibility of TB services for PWUD</td>
<td>Experts, Target group</td>
<td>reports and assessment/research results</td>
</tr>
</tbody>
</table>

Supporting content:

Any analysis of TB services for PWUD should not be limited to assessing their availability and quality, but should also include the accessibility of services. In many former Soviet Union countries, services exist, but they are not accessible – for instance, fluorography is free of charge, but to use this service a passport and medical insurance are required.

Show and talk to Slide A1.12 (Community Development/Partnership Potential)

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Interview</th>
<th>Analysis of documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of community development (self-help groups, online communities, community-based organizations etc.)</td>
<td>Target group</td>
<td>Assessments</td>
</tr>
<tr>
<td>Capacity of the community (leaders, activities and campaigns conducted, level of knowledge and awareness)</td>
<td>Target group</td>
<td>Mass media</td>
</tr>
<tr>
<td>Potential partners: institutions, decision-makers, other communities</td>
<td>Decision-makers, Experts</td>
<td>-</td>
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</table>

Supporting content:

Assessing community development and partnership potential is a necessary part of situation assessment. In fact this means assessing ‘advocacy resources’. An advocacy campaign is impossible without partnerships that will carry out and support the campaign at the level of the community, organizations and decision-makers. Building such partnerships and community capacity-building can be objectives to be achieved at the stage of preparing for an advocacy campaign. Vice versa, advocacy campaigns build capacity of the community, promote community mobilization and strengthen partnerships.

Practical work (15–20 minutes): Work in small groups. Draw up a tentative plan for a rapid situation assessment of TB control in PWID for particular regions, and assess the potential for conducting an advocacy campaign.
Show and talk to Slide A1.13 (Learning Points)

Learning Points

- Any advocacy campaign should be preceded by a situation assessment.
- Problems and available and additionally required resources should be assessed.
- Assessment can be done by communities as well as organizations or other service providers.
- Conducting assessment by itself is a step in community mobilization and establishing partnerships.
- Communities can and should take active part not only during information gathering, but also in information analysis and activity planning.

End of Module 1
Module Goal: To practise the development of an advocacy campaign.

Learning Objectives: By the end of the sessions, participants will be able to:
- define the goal for an advocacy campaign on TB-related issues;
- choose an appropriate advocacy strategy; and
- develop an action plan for an advocacy campaign.

Topics covered:
- Selecting a goal for an advocacy campaign
- Building effective partnerships
- Advocacy plan development.

Show and talk to Slide A2.1 (Module A2: Advocacy Campaign: Goal, Objectives and Means) outlining the module:
TOPIC 1: SELECTING A GOAL FOR AN ADVOCACY CAMPAIGN

Interactive lecture: 10 minutes
Practical work: 20–30 minutes

Show and talk to Slide A2.2 (The Advocacy Process)

Supporting content:
After situation analysis, existing problems become more obvious. However, not all of them can be addressed at the same time. It is important to prioritize and decide which problems can be solved using the existing resources. Selecting the problem, a solution to which will be the focus of an advocacy campaign is the key, because a wrong choice at this stage will mean that the campaign will fail. To prevent this, all steps of the advocacy process should be understood from the very beginning of the planning process. These include funds and resources required, partners to be mobilized and the possible advocacy strategies.

Show and talk to Slide A2.3 (Main Components of Advocacy)

Practical work: (20 minutes)
Participants are split into three groups and are given ‘targets’ for advocacy at three levels:
- policy and legislation;
- service delivery; and
- individual access to treatment.
This exercise ends in plenary discussion. It is important to explain to the participants that division into ‘levels’ is arbitrary and for the purpose of the exercise only. Instead of the levels, the following can be used:

- testing – prevention – service delivery; or
- regional – country – local levels.

After the groups’ presentations, each group follows the facilitator’s instructions (see Slide A2.8) and chooses one problem which in their opinion has the greatest chance of being solved through advocacy.

*Show Slide A2.4 (Practical Work)*

What Can Be Achieved in Fighting TB?

- At the level of policy and legislation
- At the level of service delivery
- At the level of the community and of the individual service user

(Source: TB Advocacy Handbook)

*Show Slide A2.5 (Level of Policy and Legislation), Slide A2.6 (Level of Service Delivery), Slide A2.7 (Level of the Community) and Slide A2.8 (Prioritization).*

*Level of Policy and Legislation*

- Decriminalization of drug use
- Adoption of a country TB strategy (taking into account specific needs of PWUD)
- Provision of sustainable financing of TB control activities
- Ensuring that local TB-related legislation is in keeping with international norms (including human rights)
- Provision of IPT to PWUD who undergo TB or TB/HIV treatment
- ?

*Level of Service Delivery*

- Training specialists to work with PWUD
- Integration of TB/HIV/drug-dependence treatment: ‘one-stop shop’ approach
- TB testing for HIV patients and HIV testing for TB patients at any service provider
- Psychological and social support to patients on TB and TB/HIV treatment
- Joint activity planning to combat TB, HIV and drug use
- Increase access to TB testing and treatment (remove barriers of requiring an ID, provide service at a convenient time etc.)
- Reducing hospitalization by providing outpatient DOT
- Promoting DOTS
- Ensuring access of vulnerable groups (prisoners, migrants) to services
TOPIC 2: ADVOCACY PLANNING

Presentation: 20 minutes
Brainstorming: 10–15 minutes

Show Slide A2.9 (Advocacy Plan – Main Elements)

Advocacy Plan – Main Elements
1. Research and data collection
2. Clarify advocacy goals/aims
3. Define objectives
4. Identify and understand the target audience
5. Build support
6. Develop clear messages
7. Identify channels of communication
8. Use social marketing
9. Fundraising
10. Implementation
11. Monitor and evaluate

Supporting content:

1. Research and data collection
We will not focus on methods of data collection, since this has already been covered.

2. Clarify advocacy goals/aims
An advocacy issue is the overall problem or situation that a group or individual seeks to focus on, address and change. In this handbook we have also used the term ‘advocacy priorities’ in a similar manner. Advocacy ‘goals’ or ‘aims’ are general statements about what needs to be achieved and/or changed to effectively address particular issues.
Examples of specific advocacy goals/aims include:
• defending the right of PWID and PWUD to access TB prevention, treatment and care and for active drug use or for continued injecting not to be used as a barrier for entry into TB services;
• encouraging the provision of OST for people dependent on opiates, as this provides opportunities to move away from risky behaviour and risk situations and can support adherence to TB and HIV treatment;
• integration between TB, HIV and drugs services as a key to effective treatment outcomes and
treatment compliance;
- promotion of good cough hygiene among clients and staff, and staff actively employing good clinical hygiene practice;
- increasing the ability of PWUD and, particularly, PWID to access TB screening, testing, IPT and second-stage treatments;
- fostering joint working between services at a policy and management level by flushing out service weaknesses and barriers to access through advocating for individual clients; and
- developing models of peer support around compliance with TB treatment to increase access and retention in treatment.

3. Define objectives
- An advocacy objective is a short-term target – one to two years maximum – that contributes to achieving a broader, longer-term goal or aim. Objectives are more precise than goals or aims and describe the specific changes that need to happen to achieve goals or aims.
- Objectives should be Specific, Measurable, Agreed-upon, Realistic and Time-based (SMART).
- Defining clear advocacy issues, goals and objectives, and identifying specific indicators that can be measured, provides the foundation for an effective advocacy campaign. If this is not done, advocacy campaigns will be in danger of losing focus.

(A practical task can be given on using Annex 5).

4. Identify and understand the target audience
To understand your target audience, it is important to consider both those individuals and groups that support the advocacy initiative and those in opposition. It is also important to be aware of those who are currently neutral on the issue but could be engaged to offer support.

Advocacy campaigns should target both those who are in direct control of a decision – the primary target audience – and those who are able to influence the decision-makers – the secondary target audience. For example, if the advocacy objective was to get a district authority to produce a TB strategy for PWUD:
- the primary target audience might include the district authority, the National AIDS Control Programme (NACP) and the local policy committee; and
- the secondary target audience might include donors, local professional bodies, NGOs, organizations of PLHIV and PWUD, business groups, religious and traditional leaders, the media, family and community groups and academic bodies.

To target your audience effectively, you need to get to know them well. This may involve more formal market research and/or networking with friendly members of the target audience or with those who have a long-standing relationship with the target audience.

5. Build support
The first focus of building support should be among your core constituency. This can be achieved by consulting people directly affected by an issue through informal peer networking, a survey of peer views and/or a consultation meeting. This helps frame and focus the advocacy strategy while also building the peer network supporting the advocacy campaign.

Further support can be generated by reaching out to other sympathetic networks, which can broaden the base of support and bring additional resources, expertise and contacts to an advocacy campaign. For example, this could involve PWUD reaching out to PLHIV and to progressive family and harm reduction networks.

6. Develop clear messages
Messages will often be specifically framed for different audiences, so how you communicate your message to a PLHIV network may often need to be different from how you communicate your message to the Minister of Health. However, all advocacy messages need to be focused, tested and action-orientated. Importantly, advocacy messages should be evidence-based. This is important to both the credibility and effectiveness of the advocacy message.
Brainstorming (15 minutes): Develop a motto for an advocacy campaign for a particular region (depending on the group composition).

7. Identify channels of communication

When selecting channels of communication for your advocacy messages, it is essential to first know your target audience and to understand how they interact with various media. When planning how to communicate your advocacy message it is useful to think about the following questions:

- Who are you targeting?
- Why are you targeting these people?
- What do you want them to do or what action do you want them to take?
- What media do they engage with?
- How can you best engage them?
- When is the best time to engage them?

Answering these questions will help you to select the most appropriate form of communication and the best strategy to reach your target audiences.

Using a combination of community, interpersonal and mass media channels of communication takes advantage of the strengths of each and may provide maximum exposure for your message. Carefully assessing your target audience, your message and your available media will help you decide which channels to choose.

Channels of communication may include:

- face-to-face meetings;
- executive briefing packets;
- public rallies;
- fact sheets;
- policy forums;
- posters and flyers in public places;
- petitions;
- public debates;
- press releases;
- press conferences; and
- competitions to design posters, slogans etc.

8. Use social marketing

Social marketing is a useful framework that involves the adaption of commercial marketing approaches to support behaviour change programmes among a target audience. The goal is to influence the
behaviour of a target audience to improve their physical and mental well-being and the community of which they are part. The process is consumer- or peer-driven and fits well with peer-based advocacy. By focusing clearly and systematically on a target audience, social marketers are able to identify and tailor responses to meet the needs of the target audience. Social marketing is most successful when it is monitored and evaluated to ensure that the programmes are being reviewed, tailored and adjusted.

9. Fundraising
The ability to mobilize resources is an important skill for advocacy work. Having access to money and resources opens up and extends the range of advocacy options. This gives members the freedom to try new, creative and sometimes higher-risk activities than would be impossible with limited funds. But no matter how much an advocacy campaign benefits from financial resources, it is often possible to launch a successful campaign with the resources and energy of network members alone.

10. Implementation
Implementation is likely to be more effective if tasks involved are clear, the resources needed are identified, a particular person is made responsible for each task and a timescale is set for the achievement of each task. The table below gives an example.

11. Monitor and evaluate
Sound monitoring and evaluation is important to track progress and successes, build credibility with donors, make adjustments to strategy and motivate members to sustain momentum. If advocacy brings about a desired change, advocates will want to demonstrate a clear connection between their objectives and activities and the outcomes. Monitoring is the process of routinely gathering information on all aspects of an advocacy campaign and using the information for ongoing decision-making. Monitoring information can help to:

- demonstrate innovative and effective strategies;
- identify difficulties as they emerge so that they can be addressed;
- generate financial and political support for advocacy activities; and
- help to market the campaign.

Evaluation involves a systematic review of the performance of the advocacy campaign. Its purpose is to:

- draw lessons from experience to improve the quality of advocacy campaigns;
- improve the design of future campaigns; and
- demonstrate the campaign’s merits to supporters, policymakers, donors, members etc.

We need to monitor activities and evaluate results.

Show Slide A2.11 (Action Plan)

<table>
<thead>
<tr>
<th>Action Plan</th>
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<tbody>
<tr>
<td>Advocacy goal:</td>
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<tr>
<td>Activity</td>
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<tr>
<td>Activity 1</td>
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<tr>
<td>Activity 2</td>
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<tr>
<td>Activity 3</td>
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<tr>
<td>Activity 4</td>
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</tbody>
</table>

Show Slide A2.11 (Action Plan)
TOPIC 3: ADVOCACY CAMPAIGN. PRACTICE

Practical work (20 minutes):

Provide an example (case study) so participants could work on the steps, results and possible further actions of the advocacy process. A group discussion can be used to share participants' own experiences in leading an advocacy campaign in their own regions.

END OF MODULE 2.
MODULE 3: PARTNERSHIPS AND ALLIES TO SUPPORT IN ADVOCACY ACTIVITIES

Module Goal: To discuss possible allies and identify opponents to the advocacy action; networking and collaborating with other organizations.

Learning Objectives: By the end of the sessions, participants will be able to:
• identify potential allies and partners for advocacy action in the region; and
• define motivation to collaborate with partners and allies.

Topics covered:
• Small-group work: mapping and analysis of organizations working with TB/HIV/drug use – 30 minutes
• Presentation: international agencies working in HIV/TB and their support – 15 minutes
• Presentation and work in small groups: collaboration models and principles: building relationship with partners and stakeholders – 30 minutes
• Skills training: effective communication 15–20 minutes.

Show and talk to Slide A3.1 (Module 3: TB Advocacy Partnerships) outlining the module:
**TOPIC 1: BUILDING PARTNERSHIPS FOR ADVOCACY**

**Small group work:** 30 minutes

**Presentation:** 15 minutes

**Small-group work** (30 minutes): Depending on the group composition, divide the participants into small groups, either by country or by city, or group the countries with similar health systems (for instance, countries of the former Soviet Union). Each group receives instruction for advocacy partners and makes a list of partners for a particular advocacy campaign *(use Annex 6)*. Other problems are possible depending on group composition.

**Show and talk to Slide A3.2 (Key Audiences):**

<table>
<thead>
<tr>
<th>Key Audiences</th>
<th>Primary target group</th>
<th>Secondary influence group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>proponents</td>
<td>opponents</td>
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<tr>
<td>National authorities</td>
<td>1, 2, 3</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>Provincial authorities</td>
<td></td>
<td></td>
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<tr>
<td>Local authorities</td>
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<tr>
<td>Law enforcement</td>
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<td></td>
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<tr>
<td>Health care institutions</td>
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<tr>
<td>NGOs and community</td>
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<tr>
<td>leaders</td>
<td>others</td>
<td></td>
</tr>
</tbody>
</table>

Emphasize that each potential partner should be interested in solving the problem. This can be done for self-promotion (also by NGOs), achieving necessary indicators (for instance, in health care) etc. Understanding the true motives of the partners will clarify expectations of their participation.

**Presentation:** International organizations working in TB and HIV among PWUD

**Show and talk to Slide A3.3 (International Partners):**

- **World Health Organization**
- **UN agencies, including:**
  - United National Office on Drugs and Crime (UNODC)
  - The Joint United Nations Programme on HIV/AIDS (UNAIDS)
  - The Commission on Narcotic Drugs (CND)
  - The International Narcotics Control Board (INCB)
- **INPUD is a global network of people who use drugs.**
- **EHRN – European Harm Reduction Network**
- **STOP TB Partnership**
- **EMCDDA – European Monitoring Centre for Drug and Drug Addiction**
- ??
Supporting content:
The World Health Organization (WHO) and the Joint United Nations Programme on HIV/AIDS (UNAIDS) are working in partnership to combat TB and, particularly, to address the relationship between TB and HIV.

HIT is an organization that provides training, consultation and information on drug-related issues. HIT aims to reduce the harm caused by drug use.

INPUD is a global network of PWUD. INPUD promotes the health and defends the rights of active PWUD around the world. INPUD’s role in this partnership has been to facilitate and support the engagement with advocates and organizations of PWUD and to support the rollout of this handbook through its networks. This will further be achieved through INPUD’s partnerships with the Global Network of People Living with HIV (GNP+) and the International Treatment Preparedness Coalition (ITPC).

TOPIC 2: EFFECTIVE COMMUNICATION

Practical work (30 minutes): Role play
An NGO implementing a project on ‘Advocacy for TB treatment access among PWUD’ found out that many patients at a TB hospital interrupt their treatment because this hospital does not offer treatment of abstinence syndrome. The NGO assesses the possibilities of such treatment. There is no substitution therapy in the country.

‘NGO representative’: you do not advocate for substitution therapy. You want patients to receive at least some kind of treatment of abstinence syndrome at the hospital, which would allow them to remain at the hospital and adhere to TB treatment.

‘Chief doctor’: you do not have any idea about ‘treatment of abstinence syndrome’. You believe that patients in need of this treatment should go to a substance-dependence treatment hospital. On the other hand, you know that the percentage of TB/HIV patients who interrupt their treatment grows every year, and as a doctor you know what the results of this can be. You regularly get ‘into trouble’ because this indicator is not good for the reporting of the city health authorities.

‘Official’: you are strongly against PWUD, and you think that the only solution for the public good is to isolate them. However, every quarter you have to report what measures are being implemented to prevent and treat TB among vulnerable population groups.

‘Chief TB doctor’: you understand very well the problem and are ready to cooperate. On the other hand, you understand that drug-dependence treatment for PWID at the TB hospital is practically impossible. You and the NGO have to compromise.

The NGO representative comes to every one of the stakeholders to ask for their support for the upcoming activities. This is your first meeting.

Discussion at the end of the role play:
• Preparation (who is this person, what is their position, what is the purpose of my visit?)
• What arguments were used?
• Which of them were successful, and which failed?
• What are the conclusions made by the participants of the role play at the end of the meeting?

If necessary, the facilitator can use handout materials ‘Arguments FOR and AGAINST’ from the EHRN advocacy training module.

END OF THE MODULE 3
References


