



The Barents Tuberculosis Program

**The Barents Euro-Arctic Council
Joint Working Group on Health and Related Social Issues**

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Abbreviations

ARV	antiretroviral
ARVT	antiretroviral therapy
HIV	human immunodeficiency virus
WHO	the World Health Organization
MDR TB	multi-drug resistant tuberculosis
IDU	injecting drug user
AIDS	acquired immunodeficiency syndrome
TB	tuberculosis
XDR TB	extensively drug resistant tuberculosis
JWGHS	Joint Working Group on Health and Related Social Issues

Introduction

The epidemiological situation regarding tuberculosis in the Barents region is rather controversial. In the countries of Northern Europe tuberculosis is kept under control and has low rates of epidemiological indicators. Currently in the Russian part of the Barents region TB control is restored where a stabilization in TB incidence, prevalence and mortality has been achieved in the last years with a tendency to improve the epidemic situation. Nevertheless TB prevalence is still high enough, and its threat is increasing due to the growth of the issues related to MDR/XDR TB as well as to HIV/TB co-infection.

While in countries of Northern Europe tuberculosis is mostly registered among immigrants and elderly people, the epidemic process in Russia penetrates into various population layers, becoming a problem not only of vulnerable groups, but also of socially advantaged ones.

TB incidence and prevalence among civilians are usually lower than within the penitentiary system, and Russian penal facilities make no exception from this rule. Many prisoners have tuberculosis diagnosed at the stage of their entry to such a facility, and a lot of people get infected with the disease while being in prison.

The Declaration of Prime Ministers, which was approved on January 11, 2003 in Kirkenes to commemorate a ten-year anniversary of the Barents Euro-Arctic Council, included a number of obligations to be taken by member countries in support of mutual cooperation in different spheres. Among other issues, it was also decided to take all the necessary measures in order to make it possible for social security and healthcare authorities to get full control over the spread of tuberculosis in the Barents region within the following decade (i.e. by 2013).

At the 10th Meeting of the Joint Working Group on Health and Related Social Issues of the Barents Euro-Arctic Region, which was held in Archangelsk on November 12, 2009, the idea of intensive international cooperation targeted at reduction of tuberculosis incidence in the region was emphasized again. The target population groups of the highest priority were defined, such as prisoners and other vulnerable social groups which either are already infected with tuberculosis or undergo the highest risk of infection. The necessity of information exchange between the anti-tuberculosis programs implemented in the penitentiary system and in the civic healthcare institutions was pointed out. Anti-tuberculosis agencies were recommended to intensify their interaction with AIDS centers. From the perspective viewpoint, it was noted that treatment and prevention of multi-drug resistant tuberculosis had to become one of the major goals. And, finally, there was also a conclusion made about the importance of maximum integration of medical and social services.

In 2010, the basis of the Barents Tuberculosis Program started to be established – its goal, objectives and major events were defined. This was mostly done during the seminar on logical and structural planning, which was conducted in Repino (in Leningrad oblast) in June 2010. Specialists from various related spheres and regions took part in the seminar.

The Barents Tuberculosis Program was developed within the framework of cooperation in the Barents Euro-Arctic region by the Joint Working Group on Health and Related Social Issues (JWGHS).

The **actual goal** of the Barents Tuberculosis Program is to take more active measures to prevent the spread of tuberculosis and HIV/TB co-infection in the Barents region, through intensive international collaboration.

The program was aimed to achieve the following **general goals**: to lower the burden of tuberculosis and HIV infection; to stop the spread of MDR and XDR tuberculosis, to promote tolerant attitude towards patients with tuberculosis and HIV/TB co-infection, which in its turn might help to reduce avoidable lethality and thus to improve demographic situation and to lower the economic burden of the disease for the society.

Some results of the Program were planned beforehand, so as to compare the real results, with these plans and to check the Program effectiveness.

The programme is expecting to accomplish following 8 **results**:

1. Intensification of experience exchange and cooperation between countries of the Barents region
2. More effective prevention against TB and TB/HIV
3. Higher efficiency of infection control measures
4. Introduction of earlier/timely and more accurate diagnostics of TB and MDR TB
5. More effective treatment of TB and TB+HIV
6. Improved capacities of facilities and institutions/service providers
7. Proactive approach of the society and government to the problem of TB
8. Successful policy and extensive partnership with the penitentiary system in programs against TB and HIV/AIDS

Each of the expected results will have several possible activities in order to achieve the goals..examples of these activities are suggested in this program. (For example, by 2013 the prompt and free-of-charge diagnostics of MDR TB by molecular genetic methods or BACTEC method is supposed to have been introduced within all national programs against tuberculosis) The number of cases of interrupted MDR TB treatment is to be reduced to 15%, and all patients with MDR TB are to get access to proper treatment of the disease. The infection control measures taken in anti-TB facilities should be improved in order to provide proper isolation of patients with XDR TB. Also, a number of measures recommended by the WHO are suggested so as to prevent the onset of tuberculosis among HIV-infected patients.

Since the program has a framework nature, any of its expected results or activities can be transformed into an international project.

The Barents Tuberculosis Program is closely connected with other regional initiatives and structures, such as the Program against HIV/AIDS in the Barents region, the Northern Dimension Partnership in Public Health and Social Well-Being (its expert group for HIV/AIDS and associated infections and its expert group for systems of primary and penitentiary healthcare) and corresponds to the national concept of etiological diagnostics of tuberculosis, implementation of

standards for TB treatment and provision of medical and social help for TB patients in the Russian Federation.

General Information

Epidemiological Situation of Tuberculosis in the Russian Federation, in the Russian Part of the Barents Region and in Northern European Countries

In recent years the epidemiological situation regarding tuberculosis in the Russian Federation has improved. The incidence was reduced by 8% within a year: in 2010 it was equal to 76.9 per 100 000 population. The lethality of the disease has also got lower and is now at the level of 15.3 per 100 000 population. Nevertheless, 21 862 people died of tuberculosis in 2010, one of the major reasons for the epidemiological disorder being a large number of patients with MDR TB. 31 359 patients with MDR/XDR TB were registered in anti-TB facilities in 2010. As the number of people living with HIV infection keeps on growing every year, the number of patients with co-infection increases simultaneously. In 2010, 10 617 new cases of TB/HIV co-infection were registered. In the Barents region of the Russian Federation the epidemiological situation is a bit more favorable than in other parts of the country. Active interaction with other countries of the Barents region helped to decrease the incidence of tuberculosis in Archangelsk oblast to 54.4, in Murmansk oblast – to 49.2, in the Republic of Karelia – to 67.8 and in the Republic of Komi – to 78.4 cases per 100 000 population. At the same time, the epidemiological problem of MDR/XDR TB is more acute in the region as compared to other parts of the country and the world. The share of primary MDR TB in the Barents region is over 30%, and the share of HIV/TB co-infection is more than 5% cases.

At the same time the epidemiological situation in some countries of the Barents region, such as Norway, Sweden and Finland, is one of the best in the world. In the Northern European part of the Barents region the TB incidence is as low as 6-7 cases per 100 000 population. The total number of patients with MDR tuberculosis in Norway and Finland less than 10 and in Sweden less than 20

The joint anti-tuberculosis program can help to improve the general epidemiological situation in the Barents region of Europe.

Program Goals, Objectives and Indicators

General and Particular Goals

The Program is targeted at intensification of measures taken against tuberculosis and HIV/TB co-infection in the Barents region on the basis of international cooperation. If the goals of the Program are successfully accomplished, it will have a positive influence on other global issues: for example, it can lower the economic burden over the society, improve the demographic situation, reduce the number of avoidable deaths, lower the burden of tuberculosis and HIV in the disease incidence structure, promote more tolerant attitude towards people with HIV and HIV/TB co-infection and also stop the spread of MDR and XDR tuberculosis.

Objectives and Expected Results

The following eight objectives were formulated in order to describe the expected results of the Program.

1. Intensified Experience Exchange and Cooperation between Countries of the Barents Region

One of the major objectives of the anti-TB program in the Barents region is to organize international experience exchange between most highly qualified specialists from Northern Europe. Experience shows that the international cooperation in the form of various targeted anti-TB measures and training courses have turned out to be very effective and useful for phthisiatricians, bacteriologists, nurses and all other groups of specialists involved in prevention and treatment of tuberculosis. The training courses conducted within the international cooperation program in previous years as well as the most prominent anti-TB programs of the Barents region are now actively visited by specialists from various parts of the Russian Federation and from former Soviet countries.

The following measures are suggested for this purpose:

1.1. Further development of cooperation between the Russian Federation and Northern European countries, in prevention, and treatment of tuberculosis.

1.1.1. Establishment of the Steering Committee to coordinate the Barents Tuberculosis Program.

1.1.1.1. Appointing members of the Steering Committee.

1.1.1.2. Applying for funding of the Program coordination.

1.1.1.3. Holding meetings of the Steering Committee.

1.1.2. Strengthening the partnerships of anti-TB professional communities in the Barents Region to support and complement regional and national actions.

1.2. Improvement of information system containing data on TB and TB/HIV in the Barents region.

1.2.1. Intensified information exchange and mutual data analysis for TB and TB/HIV in the Barents region .

1.3. Conduct of independent investigations at a high level

. Possible branches of the research:

1.3.1. Conduct joint research in development and clinical trails of TB diagnostics, medicines and vaccines,

1.3.5. Enhancement of the models for medico-social support of TB and HIV/TB patients. .

2. More Effective Prevention against TB and TB/HIV

The increase in number of patients with TB/HIV co-infection is really threatening in some parts of the Barents region and can be even viewed as an emergency situation. The share of patients with co-infection among new cases of tuberculosis diagnosed in 2010 in Archangelsk oblast was equal

to 1.3%, in Murmansk oblast – 8.7%. Given the general tendency of deterioration in the epidemiological situation regarding HIV infection, the share of co-infection is likely to grow in all

areas of the Barents region in the Russian Federation. The aggravation of epidemiological situation among patients of this category requires implementation of new principles of tuberculosis prevention recommended in the WHO guidelines.

The following measures are suggested as collaborative efforts between the TB and HIV programs: this purpose:

2.1. Increase the availability of medical services for vulnerable population groups.

2.1.1. Development of low-threshold services (medical, social, etc.) for vulnerable population groups, including immigrants.

2.1.2. Mobilize or invite civil society organisation (CSOs) groups to the Program to provide help for vulnerable population groups.

2.1.3. Establishment of outreach services for patients with tuberculosis.

2.2. Extension of the coverage zone for vulnerable population groups.

2.2.1. Provision of ARV medicines in sufficient volumes for treatment of HIV/TB patients in, including those patients living in the outlying areas: .

2.2.2. Improvement of HIV/TB co-infected IDUs' adherence to ARVT and TB treatment;

2.3. Tuberculosis prevention among patients with HIV infection.

2.3.1. Development and implementation of guidelines for preventive treatment of HIV patients against tuberculosis.

2.4. Wider application of the WHO Guidelines on Tuberculosis among HIV-positive patients.

2.5. Enhanced prevention of TB among contacts.

2.6. Provision of information about TB and HIV infection to the public

3. Higher Efficiency of Infection Control Measures

One of the major means of prevention against the spread of MDR and XDR TB is the proper division of patient flows, which helps to prevent from nosocomial infection. In accordance with the results of molecular genetic studies carried out at the TB dispensary of Archangelsk, the share of patients with MDR tuberculosis who can get infected with hospital-acquired (nosocomial) TB infection during their stay at the hospital may vary from 5 to 19%. The proper division of patient flows as well as administrative and engineering control measures against the spread of nosocomial infection can contribute to general improvement of epidemiological situation regarding drug resistant tuberculosis in the Barents region. At the same time, all patients with XDR tuberculosis need to be duly isolated in specialized hospital departments or separate infectious disease wards. As there is currently neither any strategy nor possibility of treatment for such patients, they need to be properly isolated in order to prevent further spread of the infection. Improvement of infection control norms will be based on the experience of Northern European countries.

The following measures are suggested for this purpose:

3.1. Development of guidelines, standards and standard infectious control programs for the Russian part of the Barents region. Improving the implementation of the existing plans for infection control.

. 3.2 Separate of patients according to their infection status.

3.3. Isolation of patients with infectious forms of TB..

3.3.1. Development of common standards for organization of hospital departments for treatment of MDR TB patients.

3.3.2. Arrangement of isolated wards for infectious MDR TB patients.

3.3.3. Isolation of XDR TB patients.

3.3.4. Development of guidelines on examination and treatment of patients with TB/HIV co-infection in treatment units .

3.4. Enhancement of interaction mechanisms between HIV and TB facilities in their joint treatment of patients.

3.5. Introduction of effective TB control means to be applied to HIV - infected.

4. Introduction of Earlier and More Accurate Diagnostics of TB and MDR TB

MDR tuberculosis poses one of the major problems in anti-tuberculosis programs of northern regions of the Russian Federation. Under such conditions, it is extremely important to diagnose tuberculosis and to check resistance of mycobacteria to anti-tuberculosis drugs as promptly and accurately as possible. Organization of centralized studies in reference laboratories can contribute to improvement of laboratory studies and provide bacteriological monitoring in the Barents region. Development of the national concept of etiological diagnostics of tuberculosis in the Russian Federation) as well as the (WHO) approval of the GenXpert method and Hain Test for early diagnostics of MDR tuberculosis, meaning rapid implementation of molecular genetic methods of diagnostics of drug-resistant tuberculosis in all parts of the Barents region.

The following measures were planned to be taken for this purpose:

4.1. Improvement of the existing diagnostic mechanisms.

4.1.1. Organization of free and generally available novel methods in investigation of TB suspects.

4.1.2. Implementing quality management system in laboratorial diagnose

4.1.3. Centralization of laboratory service.

4.1.4. Analysis of cost effectiveness of the novel express-diagnostic methods in areas with different density, incidence rate, climate and geographical features,

4.2. Early (timely) diagnostics of MDR TB, expand the use of the novel express-diagnostic methods in the Barents region

4.3. Provision of information about major symptoms of the disease and availability of medical services to the public.

4.4. Improve availability/access to diagnostics to vulnerable population groups.

4.4.1. Adoption of the most effective models of interaction with risk groups from other countries of the Barents region.

4.4.2. Creation of mobile centers for examination of risk groups (in collaboration with social services).

4.4.3. Attraction of risk groups to diagnostics on the basis of “peer to peer” approach

4.4.4. Extension of the range of low-threshold services for vulnerable population groups.

4.5. Establishment of the MT DNA bank network in the Barents region.

5. More Effective Treatment of TB and TB/HIV

The Program against Tuberculosis based on the WHO guidelines is currently focused on the concept of effective treatment of patients against tuberculosis. The proper organization of treatment requires timely and accurate diagnostics and registration of patients with drug-sensitive, MDR and XDR tuberculosis. For each category of patients it is necessary to introduce treatment standards for usage of primary agents during 6 months and secondary agents – during 24 months. The strategy of treatment for patients with XDR tuberculosis has not yet been developed, so such patients have a higher need for symptomatic treatment. Given the developed guidelines for treatment of TB patients in the Russian Federation, in 2011 it was necessary to implement all standards for treatment of TB patients in all areas of the Barents region. Antiretroviral treatment of HIV patients is a key component of the program against the spread of HIV infection as well as prevention of TB among HIV-infected. Implementation of new standards of life-long antiretroviral therapy of the highest activity degree will help patients to go on living a normal life and can also prevent from the spread of HIV infection among the patient’s contacts. New approaches to organization of treatment of the two infections require giving more attention to accomplishment of the given objective of the anti-TB Program.

The following measures were planned to be taken concerning this objective:

5.1. Support for constant adherence of TB patients to treatment and support to drug management.

5.1.1. Training for healthcare workers on how to deal with patients and mass media.?

5.1.2 Conduct of joint training seminars for various types of specialists of the civilian sector and the penitentiary system.

5.1.3. Development of out-patient treatment at home and in day hospital facilities.

5.2. Optimization of drug management.

5.2.1. Training of healthcare workers on how to make applications for medicines and how to use new treatment standards

5.2.2. Improvement of the medicine supply scheme in the Barents region (implementation of the centralized supply system)

5.2.3. Development of appropriate supply and distribution of medicines.

- 5.2.4. Effective reduction of adverse drug reactions.
- 5.3. Development of effective mechanisms of TB prevention and treatment for HIV patients.
 - 5.3.1. Planning of measures to prevent stigmatization of patients with HIV and TB.
 - 5.3.2. Implementation of serological methods for early diagnostics of latent TB.
 - 5.3.3 Enhancement of treatment methods among HIV/TB patient.
- 5.4. Extension of a range of available out-patient treatment methods.
- 5.5. Development of the services meeting the patients' needs.
- 5.6. Enhancement and development of MDR/XDR TB treatment standards
- 5.7. Provision of continuous treatment of patients discharged from the jail.

6. Improved Capacities of Facilities and Institutions

The lack of personnel in facilities of the anti-tuberculosis service in the Barents region is becoming a serious problem that affects the anti-tuberculosis program efficiency. The average age of the anti-tuberculosis service personnel is significantly higher than that of personnel working in other medical specialties. The risks of working with drug-resistant tuberculosis as well as insufficient financial incentives result in decrease of professional interest to this field and outflow of young specialists to other medical institutions. Therefore it is necessary to provide continuous training for new specialists and to develop skills of the personnel already involved in the anti-tuberculosis program. Relevant infection control measures should be established to protect the staff in clinical TB work, including the TB laboratories.

The following measures are suggested concerning this objective:

6.1. Training for healthcare workers on principles of timely and accurate diagnostics of TB, HIV and MDR TB.

- 6.2. Conduct of training seminars on infection control for healthcare workers and TB patients.
- 6.3. Organization of "peer" training on TB- and HIV-related issues.
- 6.4. Training of specialists on medication management.
- 6.5. Training on importance of primary health care for successful treatment of TB patients.
- 6.6. Conduct of training seminars on treatment of patients with co-infection.
- 6.7. Training for primary healthcare workers on how to provide medical care for TB patients.
- 6.8 Development of Infection control; standards for TB laboratories and medical institutions
- 6.8. Proper coverage of the civil and penitentiary healthcare sectors with sufficient amount of appropriately qualified staff for provision of TB treatment.
- 6.9. . Improve TB knowledge in Norway, Sweden and Finland

7. Proactive Approach from the Civil Society and Government to the Problem of TB

The civil society should actively cooperate with specialists on the issues of tuberculosis control. The Norwegian Heart- and Lungpatient Organisation (LHL) was founded by three TB patients and for over 50 years has been actively assisting specialists in its home country and around the world to control the spread of tuberculosis. There are similar non-state associations in Sweden and Finland. In the Russian Federation there is only one well established non-governmental organization with national coverage; the Red Cross that is actively involved in tuberculosis control activities. There are local organizations such as the Easy Breathing Fund in Arkhangelsk Oblast, which is taking on similar kind of activities and is developing support to peer groups. The anti-tuberculosis program in the Barents region should encourage and facilitate establishment and development of such non-state foundations and organizations that might contribute to improvement of the epidemiological situation regarding TB. Such non-state organizations may take on tasks such as raising awareness of the problem of tuberculosis among politicians, public officials, businessmen, mass-media and the public in general. Patient associations should also promote pro-active attitude of the society and the government to the problem of tuberculosis and co-infection, and fight stigma that is closely related to Tb and HIV.

The following measures are suggested for this purpose:

7.1. Promotion of the public involvement in the tuberculosis control program.

7.1.1. Establishment of patient associations.

7.1.2. Participation of patients in the work of coordination services.

7.1.3. Attraction of non-state organizations to participation in the Barents Tuberculosis Program.

7.1.4. Foundation of a regional (Barents) Partnership for Tuberculosis Control

7.2.1. Provision of the Barents region authorities with reliable information on the epidemiological situation regarding TB and TB/HIV.

7.2.2. Organization of inter-agency coordination councils on primary and anti-tuberculosis healthcare.

8. More Successful Policy and More Active Interaction in Programs against TB and HIV/AIDS, with the Penitentiary System Involved

Penitentiary institutions always reveal the most pressing social issues. Tuberculosis is a socially conditioned disease; therefore, it is not a rare case when TB patients are sent to prison by court decision. At the same time, the penal system itself provides favorable conditions for the fast spread of the infection. Tuberculosis incidence in prisons is far higher than among civilians and is close to epidemic. Integration of anti-tuberculosis programs conducted among civilians and in prisons allows controlling tuberculosis expansion. Coordination of anti-tuberculosis measures, as well as application of the same measures in different institutions is the key component contributing to improvement of the anti-tuberculosis program in the Barents region. It is also necessary to provide

integration between different healthcare departments and facilities. The joint program of the AIDS centers and TB dispensaries will allow taking under control the expansion of TB/HIV co-infection.

The following measures are suggested for this purpose:

8.1. Development of closer interaction between the civilian and penitentiary healthcare services, social services, drug treatment services and non-governmental organizations.

8.1.1. Conclusion of inter-agency agreements (the Federal Service for Execution of Punishment, public healthcare, non-governmental organizations).

8.2. Development of social programs.

8.3. Development of the mechanism for interaction with migration services in relation to treatment of migrants.

8.4. Provision of reliable information on TB and HIV situation for authorities to facilitate the interaction between various programs at the local level.

Monitoring and Assessment

The monitoring of the Program implementation was planned to be carried out at the meetings of the Program Steering Committee as well as in the form of annual reports and regular external audit.