NATIONAL TB STRATEGY ALBANIA

2015-2019

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SUMMARY

The World Health Organization (WHO) and the European Centre for Disease Prevention and Control (ECDC) consider Albania as a country having a sufficiently good National TB Control Programme and which has been successful in the fight against TB. During the last years, this was reflected in an improved epidemiologic situation and satisfactory epidemiological indicators, excluding the last year in which an increase in incidence was observed. On the other hand, the stable epidemiologic situation during the last years has caused TB to not be considered as a priority for public health anymore, and consequently the fight against this epidemics and its funding have diminished.

This vague fight against TB in our country is deteriorated even further from the economic crisis of the country during the last years. The economic crisis in the country has been considerably affected from the economic crisis in Europe and especially in the two neighbouring countries, Italy and Greece. The new government emerging from the elections of June 2013 has inherited an enormous internal debt, which is estimated to be approximately 70% of the GDP**.** In order to come out from this emergency situation, the government has obtained a loan of USD 300 million from the International Monetary Fund for a three year period and another loan from the World Bank amounting to 200 million**.** These loans shall be designated to the repayment of national debt and under these conditions, it is almost impossible for the government to fund a worthy TB program.

Moreover, TB control in our country is jeopardised from other real factors as well, which can be grouped in medical and socio-economic factors.

Apart from the economic crisis, we believe that the most important socio-economic factors that can affect the deterioration of TB control, are as follows: the increase of poverty in specific groups of the population; uncontrolled movements of the population within and outside the country; the mass tourism of families, especially from Kosovo, and the return of migrants due to the economic crisis in Greece and Italy.

Whereas, among the medical factors we can mention: the accelerated medical reforms and their impact on the TB control, especially in TB patient's access to health care services. Likewise, the abrupt conversion of lung diseases hospitals to general hospitals has been accompanied by a drastic shortage of funds for the National TB Reference Laboratory and for other activities related to TB control.

Since the fall of communism in 1992, Albania has been characterized by a long period of transition and fluctuations in the fight against TB. This period can be divided in two sub-periods:

1. 1999-2000 was characterized by a deterioration of the epidemiologic situation and by an almost complete damage to the physical infrastructure of the anti-TB dispensary network.
2. 2000-2012 was characterized by an improvement of physical infrastructure, bacteriological laboratory network and the epidemiologic situation.

It should be emphasised that in the second sub-period, the foreign funds have played an important role which has enabled the revitalization of the fight against TB, establishing the necessary physical infrastructure for the diagnostics, treatment and strengthening of the health system in the fight against TB.
From these funding we can mention the project of the European Community, WHO and several NGOs with approximately USD 2 million during 2000-2003 and GF project of USD 1.2 million during 2007-2012.
The stabilized epidemiologic situation in Albania is reflected in the main epidemiologic indicators, which in the last 5 years resulted in: a low incidence with an average of 14.4 cases per 100,000 inhabitants *(but with an increasing trend to 16.8 cases in 2013)*; a low bacterial resistance and especially the *multi-drug resistance* (MDR): < 2% at national level; mortality < 0.4 per 100,000 inhabitants and good treatment results, with approximately 90% successful treatments.
The total cost for TB control during 2015-2017 has been estimated to be (approximately) 3 million Euro. This period coincides with the GF implementation and in this context, this strategy may probably also consider its financial assistance.

The implementation of the new strategy is supported by the fact that we have a good infrastructure for TB control with regards to the human and physical infrastructure, with qualified doctors and nurses and the support and commitment of the new government for its implementation.

The new strategy is based on the “Stop TB Strategy” recommended by WHO and has been customized according to the needs of our country.

The implementation of the strategy aims to consolidate the fight against TB in Albania, maintain and improve the results achieved and to finally have a NTP independent from the foreign donations.

Abbreviations

AFB.....Acid-Fast Bacilli (Bacilli Koch)

BCG.....Bacil-Calmette-Guerin Vaccine

BK.....Bacillus Koch (Mycobacterium tuberculosis)

DOT.....Directly Observed Therapy

DOTS.....Directly Observed Therapy Short Course Strategy

DST.....Drug Sensibility Testing

ECHO.....European Community Humanitarian Office

EUROTB.....European Region Surveillance of Tuberculosis and AIDS

GDP.....Gross Domestic Product

GF.....Global Fund to Fight AIDS, Tuberculosis and Malaria

HIV.....Human Immunodeficiency Virus

INSTAT.....Institute of Statistics

IPH.....Institute of Public Health

IUATLD.....International Union Against Tuberculosis and Lung Disease

KNCV.....Royal Netherlands Tuberculosis Association

STC.....Short-term chemotherapy

CSF.....Cerebrospinal fluid

NRLTB.....National Reference Laboratory of TB

MDR.....Multidrug-Resistance

MoH.....Ministry of Health

FD.....Family doctor

WHO.....World Health Organization

NGO.....Non-governmental organization

NTP.....National Tuberculosis Control Programme

PPD.....Purified Protein Derivative

UHT “Shefqet Ndroqi”.....Tirana University Hospital of Tirana “Shefqet Ndroqi”

AIDS.....Acquired Immunodeficiency Syndrome
TB.....Tuberculosis

Abbreviations of anti-tuberculosis drugs

E.....Ethambutol

H.....Isoniazid

R.....Rifampicin

S.....Streptomycin

Z.....Pyrazinamide

CORE PLAN

SITUATION ANALYSIS

A. ECONOMIC AND SOCIAL SITUATION OF ALBANIA AND HEALTHCARE ORGANISATION

Albania lies in the South-Western part of the Balkan Peninsula. Pursuant to the official data, the Albanian population of 2011 consisted of 2,800,138 inhabitants.

Administratively, Albania is divided in 12 prefectures. Each of them includes approximately 3 districts, and there are 36 districts at national level. There are 42 municipalities and 315 communes at district level. The capital is Tirana, with a population which has been considerably increased during the last years and is currently estimated to have 763,634 inhabitants (2011 Census).

About 53.5% of the population (INSTAT 2011) lives in urban areas and approximately 25.6% in the capital (2011).

The average increase rate of the urban population during 1990-2006 has been 1.2%, whilst the population increase rate is 0.529% (2007). This is mainly due to the population migration towards urban areas during the last years. Therefore, during the last 15 years, the regions of Tirana, Durrës and Fier are characterized by an average increase of their population by 2 times as compared to the decrease by the same extent of the population in the regions of Kukësi, Shkodra and Dibra.

The significant socio-economic changes were associated with population migration and emigration. Approximately 700,000 Albanians, mainly males, have emigrated abroad (INSTAT 2005).

98% of the Albanian population are Albanians and 2% are minority groups such as, Greeks, Vlachs, Montenegrins, Macedonians, Roma and Bulgarians (INSTAT 2011). Nevertheless, it should be emphasised that 15% of the interviewed individuals have not declared their ethnicity (INSTAT 2011).

POPULATION DISTRIBUTION AS PER THE AGE GROUPS

About 20.7% of the population belong to the age group of 0-14 years old; 43.7% belong to the age group of 15-44 years old; 24.3% belong to the age group of 45-64 years old and 11.3% of the general population belong to the age group of over 65 years old. Therefore, the Albanian population is growing older and the population average age in 2011 was 35.3 years old.

THE MAIN HEALTH INDICATORS AND ORGANISATION OF THE HEALTH SYSTEM

Due to the difficult period of transition, the health condition of the population appears to be problematic. Nonetheless, the main indicators of hospitals and primary health care service are improving.

- The birth rate is 12.5 births per 1,000 inhabitants (in 2011) and the male/female ratio is 1.078.
- The fertility rate is 1.78 births per woman aged 15-45. (2012).
- Infant mortality rate per 1,000 live births has declined from 28.3 in 1990, to 20.2 in 2007; 9.7 in 2010; 8.7 in 2011 and 7.8 in 2012 (MoH).
- As compared to Western Europe, the maternal mortality rate is still higher, however, it has been reduced from 28 per 100,000 live births in 1994 to 16.7 until 2006; 5.8 in 2011 and 5.7 per 100,000 live birth in 2012 (MoH).

The general mortality rate has undergone significant fluctuations during 1993 – 2010. General mortality rate per 100,000 inhabitants is increased during 1993-2004: from 465.1 in 1993 to 567.6 in 2005, but there is a significant decrease in 2010 at a rate of 379.7 deaths per 100,000 inhabitants (INSTAT 2010).

Significant changes are noticed in sublevels of cause-specific mortality throughout the years, as detailed below.

The main group of diseases causing death are:

- Cardiovascular apparatus: 208.7 deaths per 100,000 inhabitants (2010) from 286.4 deaths per 100,000 inhabitants (2004).
- Tumours: 63.5 deaths per 100,000 inhabitants (2010) from 93.1 deaths per 100,000 inhabitants (2004).
- Undefined causes: 46.2 deaths per 100,000 inhabitants (2010) from 63.8 deaths per 100,000 inhabitants (2004).
- Trauma-accidents: 22.3 deaths per 100,000 inhabitants (2010) from 38.9 deaths per 100,000 inhabitants (2004).
- Respiratory apparatus: 11.4 deaths per 100,000 inhabitants (2010) from 30.5 deaths per 100,000 inhabitants (2004).

Hospital mortality remains at the same level: 11-12% during 1993-2004.

As per the population projections, life expectancy is estimated at 77.4 years in 2009 (INSTAT 2011), indicating an increase of approximately 2 years as compared to 2004, when this indicator was reported as 75.7 years.

Male life expectancy is 75.4 years while female life expectancy is 79.8 years (INSTAT 2011), indicating a significant increase as compared to the estimates of 2004, when it was estimated at 73.8 years and 78.4 years, respectively for males and females (INSTAT 2004).

Children's immunization is mandatory. It is done at the maternity hospital and child care centres. The vaccines used in our country are: BCG for TB; Beta DPT1 for diphtheria, pertussis and tetanus; HepB3 for hepatitis B, and polio vaccine. The immunization coverage indicators are at satisfactory rates. Thus, the following coverage rates as per vaccines were reported in 2012: BCG-99.7%; DTV-Hep-HiB-3-98.9%; PCV-3-98.9%; MMR-1-98.6% and OPV-3-99%.

SOCIO-ECONOMIC DATA

During the last 2 decades, Albania has faced continuous political and social changes. Nowadays, Albania is a country pursuing considerable economic and structural reforms.

Nevertheless, Albania remains one of the poorest countries in Europe, regardless of the country undergoing a slow but stable economic progress.

According to the Bank of Albania, the income in 2007 was USD 3,150, per individual, per year, indicating a considerable increase during the last years.

According to the poverty rate estimation of the World Bank, as performed in 2005, the official unemployment rate is 13.5%, whilst 18.5% of the population lives below the average poverty line.
The latest estimates reveal an unemployment level at 13.4% in 2012.
Pursuant to the Living Standards Measurement Study (LSMS) survey in 2012, approximately 14.3% of the population lives under the poverty line, whilst 2.2% of the population is considered as extremely poor (INSTAT).

The real increase of GDP (in 2007) is 6% per capita.

Inflation rate is 3%.

The annual average increase of GDP per capita for 1990-2006 is 5.2%, but approximately 4 % of the population spends less than USD 1 a day (1995-2005).

Government expenditures on health are 4% (1995-2005).

Expressed as a percentage of GDP, the expenditures on health consist of 6.5% (2005), whilst in 2011, the expenditures on health consisted of 5.04% of the GDP (MoH, 2012).

Health related expenditures *per capita* are 353 (Int USD, 2005).

Albanian government has recently prepared a new strategy "On the elimination of poverty and social and economic development" which aims at the reduction of poverty and the economic and social development of the country. This strategy provides an important role to the attempts made towards the TB and HIV control and prevention in Albania.
Additionally, Albanian government has signed the Millennium Declaration, whereby it expresses its commitment in achieving the Millennium Development Goals.

ORGANIZATION OF THE HEALTH SYSTEM

Health system in Albania is mainly public. The government ensures the major part of services provided to the population, such as in the field of promotion, prevention, diagnosis and treatment. The private sector covers the major part of the pharmaceutical service as well as dental service. During the last years, there has been a significant increase of private healthcare activities, both in speciality clinics and diagnostic centre level, as well as in private hospitals. The latest are mainly centralized in Tirana, whereas private clinics are also located in the largest cities of the country.
Ministry of Health plays the leading role in the public sector. It is the drafting body and responsible for the policies and strategies in the health system, for its adjustment and coordination of all the system external and internal stakeholders.
The diagnostic and treatment healthcare is organized in three levels:

- primary health care
- secondary hospital care
- tertiary hospital care

Primary health care is represented by primary health care centres. There are 406 in the country.
Health care centres provide all services of primary health care: public health services and promotion, which are supported and supervised by IPH as well as the diagnosis, treatment, recovery and other health care services.
Currently, there are 1,742 general practitioners employed in the primary health care and registered with the MoH and 6,640 nurses/midwifes.
There is a general practitioner in town covering approximately 2,000 adult inhabitants and one paediatrician per 1,000 children.
There is a practitioner in countryside providing health care to all group ages, approximately to 1,700 inhabitants. Currently, in remote mountainous areas, as a result of the lack of practitioners, there is only one practitioner per 5,000 inhabitants.

Secondary health care is represented by district and regional hospitals.

There are 34 hospitals in the country: 22 district hospitals and 12 regional hospitals.
The number of hospital beds in Albania is estimated at 8,410 in 2012 and 8,711 in 2011 (INSTAT) and this number has decreased significantly with the passing of the years (14,000 in 1992; 12,000 in 1993), at a ratio of 28.2 beds/10,000 inhabitants.
The major part of them consists of acute care beds.

Tertiary health care is represented by University Hospital Centre, which is the national centre of referral and diagnosis.

FUNDING OF HEALTHCARE

Healthcare is funded by the state budget, as per the respective items related to public health, primary care and hospitals.

Healthcare funds cover the following: the main medicaments, general practitioners, several specialities and the very expensive diagnostic procedures at UHCT and Durrës hospital. The recent developments aim to convert the health insurance fund into the sole buyer of the primary, secondary and tertiary care in our country. The reform in this regard is in continuous process.

The health insurance in the Republic of Albania is institutionalized, pursuant to the law "On health insurances in the Republic of Albania" (No. 7870), dated 13/10/1994. Nonetheless, the Law no. 10383, dated 24/02/2011 "On compulsory health insurance in the Republic of Albania" entered in force in March 2013. This law provides for the scheme of health insurances in our country.

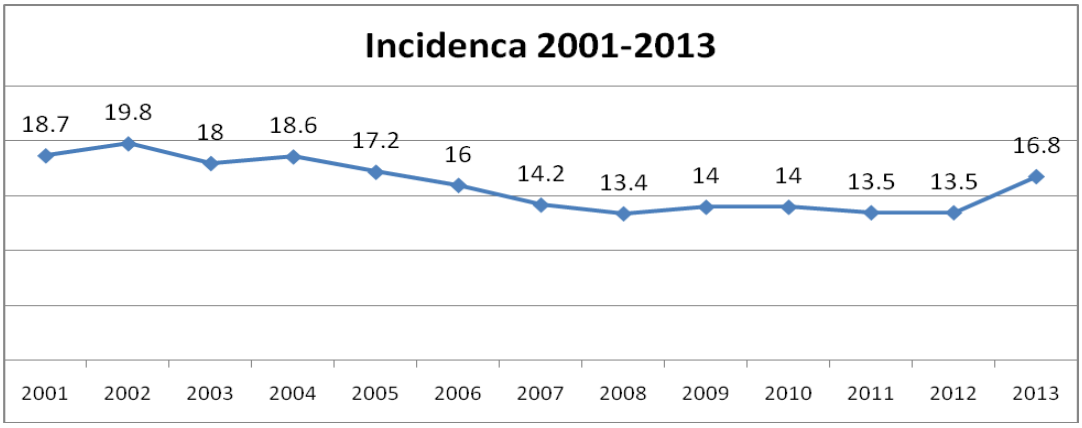
Health insurance covers about 45% of the population.

TB EPIDEMIOLOGIC SITUATION IN ALBANIA

TB epidemiologic situation has continuously improved during recent years and all epidemiologic main indicators reveal a stabilized and improving situation. The current situation is characterized by a low incidence (16.8 new cases per 100,000 inhabitants), a low recidive rate (under 4%), low bacterial resistance (1.1%), low mortality (approximately 0.4 per 100,000 inhabitants) and high treatment results (over 92%).

During the first years of democracy, TB had a slight deterioration tendency which persisted for many years with slight oscillations, in order to be stabilized over last years.

The following chart reflects the epidemiologic situation in Albania between 2001 and 2013.



The chart reveals that after a long period of TB incidence stability, there is an increase by about 3.3 cases, a small increase but which must be seriously considered. We think that this relates to the abovementioned factors, mainly to the deterioration of economic situation and the return of emigrants.

Regarding to incidence, Albania is considered as a country with an incidence below average. Albania has the lowest incidence in the region, except Greece, having an incidence of 4.5/100,000 inhabitants. The other countries in the region have the following incidence: Macedonia–18/100,000 inhabitants; Montenegro–18/100,000 inhabitants; Kosovo–51/100,000 inhabitants; Serbia–23/100,000 inhabitants; Bulgaria–32/100,000 inhabitants; Bosnia–Herzegovina–49/100,000 inhabitants and Croatia–28/100,000 inhabitants.

A total of 474 TB cases were reported in 2013, divided as follows: new (untreated before): 455 cases (96%); recidive: 18 cases (3.8%); default: 1 case (0.2%)

TB forms appears as follows: pulmonary cases: 333 (70.5%); new pulmonary cases: 314 cases (66.2%); extra-pulmonary: 141 (29.5%).

The data reveal a very low number of recidive and treatment default rates.
However, it is necessary that on site verification be made throughout the country, because there has been no monitoring in lung dispensaries in the last two years.
As regards the bacteriological examination results, the following are the 2012 data, since no culture examination was carried out in 2013.

- smear positive: 206 (66% of pulmonary cases);
- culture positive: 185 (60% of pulmonary cases);

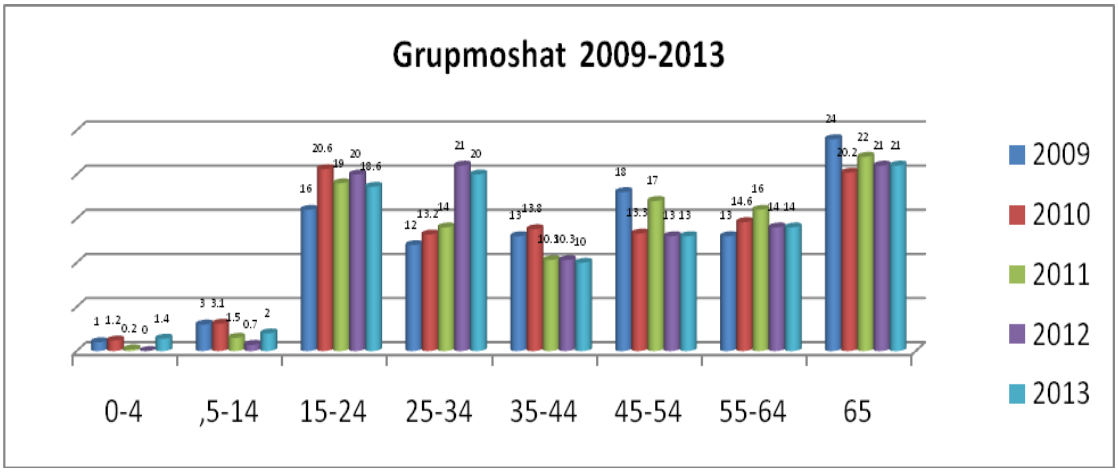
The rate of positive sputum cases is very high, revealing the good job of laboratories, but on the other hand, delayed diagnosis in advanced stages of TB disease is not to be excluded.

TB structure as per the age group and gender

The age groups of 15-24 years old (18.6%), 25-34 years old (20%) and >65 years old (21%), have been the most affected in 2013.
2 phenomena are noticed from the comparison of age groups during the last five years:

- TB case increase in paediatric age groups during 2013
- TB case increase in group ages of 15-34 years old during the years

Fig.2 illustrates the distribution as per the age groups during 2009-2013



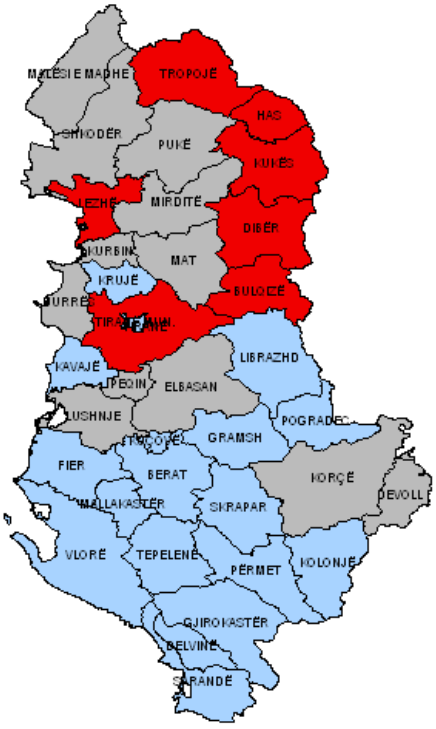
Males continue to be affected by all forms of TB, much more than the females. This ratio has been 2:1 in 2013, and has been preserved for many decades, rising also suspicions on the under-diagnosis of TB among females.

GEOGRAIPHC DISTRIBUTION OF TUBERCULOSIS

There is a remarkable geographical distribution of tuberculosis in Albania, not equal and with large differences between various geographical regions. This difference is more evident among northeast and south areas. The highest incidence for 2013 has been indicated in the following districts: Kukës (54/100,000); Tropoja (30.7/100,000); Bulqiza (28/100,000); Lezha (26/100,000) and Dibra (25/100,000) inhabitants.

As compared to 5 years ago, there is a decrease of incidence in districts such as: Tropoja, Mirdita and Puka, whilst there is an increase in districts like: Lushnjë, Elbasan and Tirana. At our opinion these incidence differences reflect the population displacement. In districts where the incidence has decreased, the population is displaced; whilst in districts with a significant increase of population, with inhabitants coming from northeast areas of high TB incidence, there is an increase of incidence. The districts with the lowest incidence remain Gjirokastra, Tepelena, Përmet and Saranda, in south Albania. It is about 1.8 -2/100 000 inhabitants.

The following map reflects the incidence by districts of the country.



Incidence: *red >20; grey >10; blue < 10*

The ratio of TB patients as per their residence, in the countryside or in the city, is constantly changing in favour of the city and is being gradually equalized. This is due to the massive demographic displacement in our country.

There is an estimated 285 TB cases in urban areas (60%) and 189 TB cases in rural areas (40%) in 2013.

DATA ON ANTI-TUBERCULOSIS DRUGS RESISTANCE

Testing of drug resistance for *M. tuberculosis* is performed through the proportion method (Cannetti & Grosset in Lowenstein-Jensen), as per the protocol recommended by WHO.

Drug Resistance Survey was performed for the first time in Albania during 2010, funded by GF, *US Agency for International Development*. Its main goal was the assessment of the first line anti-tuberculosis drugs resistance prevalence in TB cases, as well as the assessment of whether the resistance statistics relate to the age, sex and the history of treatment with anti-tuberculosis drugs. This cross-sectional study included the new and retreated cases of microscopically positive pulmonary TB in a one year period and 5.9% of all samples proved to be mono-resistant.

Mono –resistance prevalence was:

- 2.9% for Streptomycin
- 2.4% for Isoniazid
- 0.5% for Rifampicin

Multi Drug Resistance (MDR) prevalence was estimated at 1.0%.

Isoniazid resistance prevalence was higher at already treated patient, with a significant statistical difference in new patients (χ^2=21.1 p<0.001). Men were 1.67 times more at risk for MDR-TB than women (OR = 1.67 95% CI (0.08 – 35.6) p $_{\text{(Fisher's exact test)}}$ =0.6
Two MDR samples were tested in SRL-Milan for their susceptibility to second line anti-tuberculosis drugs (Amikacin, Capreomycin, Ofloxacin and Kanamycin). They were susceptible to the four anti-tuberculosis drugs.

Approximately 1/3 of 174 (32%) patients with culture-positive pulmonary TB live in Tirana.

INTERVENTION MEASURE UNDERTAKEN TO DATE

ORGANISATION OF TUBERCULOSIS IN ALBANIA AND POLITICAL COMMITMENT OF THE GOVERNMENT

TB has been always considered as a priority by the Albanian government and the legislation on its control has been continuously improved.
Significant improvements on TB control have been made to the law no. 161 of 1983, “On reorganization of the fight against tuberculosis” of the Council of Ministers, with the stipulation on the free treatment, strengthening of the active screening and vaccination amongst the most important measures. This was a law giving priority to active screening and prophylaxis, significantly strengthening the fight against TB for that specific time.

In 1993, the law "On the control of infective diseases", the Parliamentary acts on the prevention and fight against infective diseases, included also law no. 7761 "On the fight against TB".

TB is classified as infective disease by Order No. 189, issued by the Ministry of Health in 1995.

Pursuant to WHO/IUATLD recommendations on the implementation of DOTS in Albania, in 1996 was established the National Committee on TB Control. Since its first meetings, this committee principally decided on the DOTS implementation in Albania. This committee has operated very well during the first years, but it stopped its operation since 2007, giving rise to problems in coordination and legislation related to TB.

The Minister Order no. 105, dated 02/12/1998 specifies several other measures to be undertaken in fighting TB, pursuant to the law no. 7761, dated 19/10/1993 “On preventing and fighting communicable diseases and WHO recommendations on the implementation of DOTS strategy for fighting TB in Albania". This law emphasises that TB disease is a public health concern, which imposes the same responsibility on specialized bodies as well as on primary health care authority. The most important measures undertaken pursuant to this law include the recreation of a network for diagnostic laboratories and the initiation of DOTS strategy implementation in two pilot districts, Tirana and Shkodra.

The manual on TB control in the country, drafted and published in 2002, provides for more specific technical adjustments on TB control in Albania.

The National Strategy on TB Control was drafted for the first time in 1999. Two other national strategies were drafted thereafter, specifically in 2006 and 2009.

Nevertheless, the strategies implementation is difficult in practice, and the existing legislation is not observed in many cases.

Regardless of the fact that ambulatory care has a unified regulation in national level, such regulation is not implemented equally as regards the pulmonology care subordination in districts.
In some districts the pulmonology care is subordinate to hospitals directorates, whilst in others is subordinate to the primary health care.
This is often made arbitrarily and is subject to the will of local leaders.

Recently the NTP lacked financial and logistic support for performing supervision and monitoring activities.
No reagents were acquired for bacteriological laboratories.
For the first time in the history of the country, in the last year cultures and drug susceptibility tests were not conducted.
PPD is not purchased since the completion of the project funded by GF and consequently we are not able to detect the latent TB infection and to perform the chemoprophylaxis.
Anti-TB drugs are still unregistered, although in the recent year we have had a budget line dedicated only to them.
Very important decisions such as closure of lung decease hospitals and their conversion to general hospitals were very often made without prior consultations with the stakeholders and NTP.

Finally, we can say that the political commitment of the Ministry of Health, despite seemingly correct, has declined in the recent years.

As already mentioned above, the last two decades may be divided into two periods.

The first period, 1990-2000, coinciding with the first decade of democracy, where the government commitment was present, but this commitment was more focused in the area of legislation and reforms, without being accompanied by concrete measures and financial support.

Consequently, during this period, the majority of physical infrastructure of dispensaries suffered degradation and by the end of 2000 all bacteriological laboratories in dispensaries were out of order and the physical conditions of dispensaries were deplorable.

The second period begins in 2000. This period was technically and financially supported by foreign organizations such as WHO, the European Community and GF. During this period all dispensaries were reconstructed, the bacteriological diagnosis network became functional in districts, DOTS strategy started and expanded, many documents that have improved TB control were published and many trainings for specialists, doctors and nurses in ambulatory care were held.

TUBERCULOSIS CONTROL IN ALBANIA

Tuberculosis control including diagnosis, treatment and prophylaxis, except for BCG vaccination, are integrated in the pulmonology care since 1982. At ambulatory care, this service is provided by lung disease dispensaries, which are generally extensions of former dispensaries against tuberculosis. Their staff consist of one or several pulmonologists, some former vaccinator nurses, a radiology technician, a bacteriological laboratory technician, in case there are such laboratories.

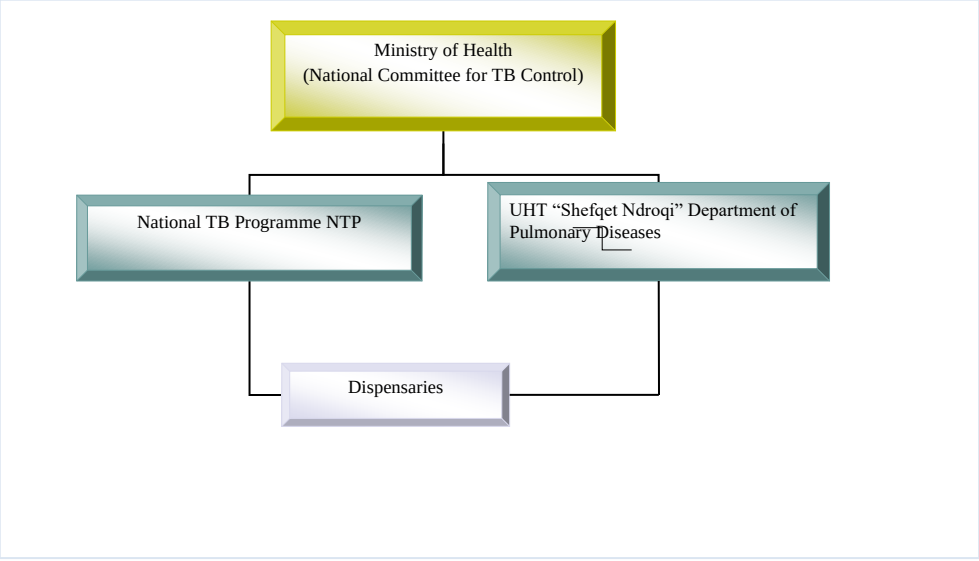
TB control in Albania is organized vertically, i.e. it is a closed system within the pulmonology speciality. Frequent efforts have been made to integrate it in primary care or to involve the family doctor in TB control, and particularly in providing treatment during the continuation phase, but they have all failed.

The Ministry of Health is the central body in charge of TB control. The National Committee on TB Control, established in 1996, used to operate at this Ministry. This Ministry is in charge of legislation and budget related to TB control.

Currently there is no special budged for tuberculosis, in place. The Ministry of Health allocate the comprehensive budget to hospitals and districts for all services. The budget for anti-tuberculosis drugs is separate and is allocated to Tirana University Hospital, to be managed by the latter.

Tirana University Hospital “Shefqet Ndroqi”, is the leading institution in the fight against tuberculosis. National Reference Laboratory for Tuberculosis (NRLTB) and NTP are integrated structures of this hospital. Additionally, all medical students, postgraduate doctors and lab technicians are qualified at this hospital.

The following diagram reflects the general organization of TB in Albania:



There is no defined number of beds for the treatment of TB cases nationwide. In the three former lung diseases hospitals the care is provided according to the needs.

There are approximately 60 beds in these hospitals, which is a drastic reduction as compared to the situation 15-20 years before, where there were 150 beds for the treatment of TB cases. Currently, attempts are being made towards the hospitalization and treatment of patients with tuberculosis in their respective districts.

There is an undetermined number of beds in Vlora Psychiatric Hospital, for patients with mental illness (about 5 beds), but this hospital is currently not operating because it is being reconstructed.

CASES DETECTION, DIAGNOSIS AND LABORATORY SERVICE ORGANIZATION

Dispensaries of lung diseases

As a rule, the FD should refer patients with respiratory complaints such as cough, sputum production etc., or patients that as per their opinion need further additional examinations, to the pulmonologist doctor, who can be found in ambulatory care or at the hospital. Often, the patients appear at dispensaries personally and without the recommendation of the family doctor.
Implementation of the reference system in 2010 has affected the previous access.
In most cases, when the dispensary doctor suspects for tuberculosis or diagnoses the tuberculosis, he/she shall refer such patient for further hospital treatment in one of three former lung disease hospitals. Recently, tuberculosis is being treated in the respective districts. Even the cases of other pulmonary diseases that cannot be treated in the ambulatory care or district hospitals are referred to the former lung disease hospitals, as well as the patients with unclear diagnosis that need further examinations and diagnostic procedures.

Physical conditions of dispensaries and laboratories

All dispensaries and laboratories are reconstructed and equipped with the required equipment for the TB bacteriological diagnosis. Reconstruction and supply with equipment was made in 2000-2002, in the framework of ECHO program, with European Community funds. In 2007 initiated the GF funded project. This project has equipped the laboratories in districts and NRLTB with microscopes and reagents, substantially contributing to the improvement of laboratory diagnosis. Currently, most dispensaries are in good physical condition and equipped with microscopes for sputum smear examination.

Nevertheless, problems are faced in some dispensaries, which need further intervention, especially as regards infrastructure, but then again the supply with reagents remains the most urgent problem.

There are 2 models for the organization of dispensaries in national level. Some of them are direct subordinates of dispensaries against TB and inherit recently renovated buildings with sufficient space. These dispensaries have more than one pulmonologist, some former vaccination nurses and a bacteriological laboratory. The rest of dispensaries have only one doctor with one or two nurses and no bacteriological laboratory.

There are few dispensaries with no pulmonologist, such as in Tropoja and Kucova from 10 years.

Recently, some pulmonologists, mostly retired doctors, have started the private healthcare clinics in Tirana, Gjirokastra, Fier, Durrës, Shkodra, Saranda, Lushnja and Burrel. These practitioners may help in TB cases diagnosis, but they are not entitled to treat such cases and must refer them to the dispensary.

Children with TB are treated in the University Hospital "Nënë Tereza" and cases of meningitis or other forms of extrapulmonary TB are treated by specialty, in the same hospital.

In 2007 it was established a new position: "the public health nurse for TB control in prefecture level". This position was intended to strengthen the role of nurses in TB control, but it was not realized in practice. The nurses were selected among the prefecture dispensaries staff, but such a thing was not well received by the dispensaries supervisors and such nurses' colleagues who were in equal positions in respective districts.

Medical staff of dispensaries

Medical staff working in dispensaries is trained several times for the implementation of DOTS. Generally, there is a good commitment of dispensaries staff in DOTS implementation, but medication under supervision remains a problem.

As regards the medical staff, the following problems are observed:

1. Distribution of pulmonologists in national level. In districts with high incidence of TB and other pulmonary diseases, such as in Tropoja, Kukës, Dibra, there are no pulmonologists, whilst in districts with low incidence, such as in Gramsh, there is overload, to the extent that there are more practitioners than TB patients.

2. Frequent changes in dispensaries staff and appointment of nurses as head of dispensaries without the required experience and qualification, considering their function as comfortable. In the recent years, in most dispensaries it is observed

that trained staff, including the ones who have received training provided by GF related to the implementation of DOTS, are replaced with untrained staff.

Dispensaries and the number of their current staff is shown as follows.

Dispensary	**No. of doctors**	**No. of Nurses**	**No. of laboratories**		**Total**
District	**Doctors**	**Doctor's nurse**	**Microbiologic**	**Rentgenologic**	
Korça	1	5			6
Gjirokastra	1	1	1		3
Kukës	1	6	1		8
Durrës	3	2			5
Vlora	2	4	1	1	8
Berat	1	5	1		7
Tirana	8	23	1	3	35
Lezha	2	3	1		6
Tropoja		1			1
Dibra	1	3	1	1	6
Elbasan	2	14	1		17
Kamëz	1	1			2
Shkodra	1	10	1	1	13
Kavaja	1	2	1		4
Puka	1	2			3
Tepelena	1	1			2
Përmet		1			1
Bulqiza	1	1			2
Mat	1	2			3
Mirdita	1	2	1		4
Fier	2	2	1	1	6
Lushnja	1	1	1	1	4
Saranda	1	2			3
Kruja	1	2		1	4
Gramsh	1	2			3
Librazhd	1	2			3
Kurbin	1	1			2
Total	38	101	13	9	161

Another concerning problem is still the exclusion of former vaccinators from the daily control of medication.
In most cases DOT cannot be implemented due to physical causes, such as distance. Most patients reside very far from dispensaries, which has a negative financial impact as well.
Nonetheless, even in cases where such problem is inexistent, e.g. in the cities, DOT is not properly implemented.

Detection and treatment of cases
The detection of TB cases in the dispensaries is based on the clinical, radiological and bacteriological examination (sputum smear examination). In the majority of the cases, diagnosis still relies still on the fluoroscopic examination.
The radiological examination remains the basic examination for tuberculosis diagnosis, whereas pulmonologist in districts continue to neglect the bacteriological examination for various reasons.
By rule, the TB patients and especially those smear positive cases, are hospitalized in one of the three former lung diseases hospitals during the first month or, precisely, until they are converted into BK negative.
Due to lack of beds in the University Hospital of Tirana, TB patients are released from hospital without being converted to negative sputum smear.
Recently TB patients are treated in their respective district hospitals.
In the cases when diagnosis is given in dispensaries, the latter are obliged to notify the NTP according to the notification form drafted in 2003 and updated afterwards pursuant to the recommendations of WHO. In cases when diagnosis is given or confirmed in the University Hospital of Tirana, the NTP notifies the respective dispensary.

The active detection of cases has worked well for the close contacts of TB patients and for a lot of vulnerable groups as well, such as Roma population, prisoners etc. during the Rnd 5 of the GF project. With its ending, this screening stopped being operational, excluding contact tracing for close contacts of TB patients.

Control with PPD for relatives of TB patients has been operational only during the project funded by the GF and no examination for the detection of LTBI has been performed upon its closure.

The present screening of contacts in the majority of cases is performed only with radioscopy or radiography and the percentage of individuals from family members checked up for TB with radiological examination is approximately 70%.

Active screening for specific professions that can represent a higher risk for the infection of population is not performed anymore, even though the appropriate legislation for the terms and conditions of their employment is already in place.

DOTS implementation

DOTS implementation started in 2001, after a preparatory and training period during 1998 - 2000. This implementation started first in two pilot areas, respectively in Tirana and Shkodra, covering only 30% of the country. DOTS implementation throughout the country was enabled during the first three years of the project funded from the GF (2007-2010).

DOT (Directly Observed Therapy)

By rule, TB patients, especially those BK positive, are hospitalized for treatment during the intensive phase in the former lung hospitals and currently in the districts hospitals as well. Over 90% of cases with positive sputum are treated in the hospitals of Tirana, Shkodra and Korça. In hospitals, DOT is performed accurately as medication is administered in the presence of a nurse.

The hospitalization days of smear positive cases have been reduced a lot in the last years and they are often prematurely discharged, without being converted to negative smear and without a personalized follow up plan.

As a rule, during the follow up period in the cities, DOT is performed once a week, whereas the administration and control of medications received in the villages is generally performed once a month. This is only implemented by the dispensary. The family doctor is not included in the control of tuberculosis.

The recording and reporting system

Albania has a good system of information. The pulmonologist makes the recording. In hospitals, the notification is done from the bacteriological laboratory to the NTP and simultaneously to the pulmonologist. We do not have a double reporting system including the laboratory technicians and pulmonologists. Only the latter do the reporting. However, we have a double control from the NTP on the clinicians and laboratories, thus the possibility of non-reporting cases with positive sputum or culture is almost inexistent. The data are aggregated and individual, and in compliance with the requirements of EuroTB and WHO. The variables recorded and used are suitable for monitoring TB control and DOTS strategy performance.

THE LABORATORY SERVICES IN TUBERCULOSIS CONTROL

The laboratory services play a key role in the diagnosis, treatment and epidemiologic investigation of tuberculosis. Those are one of the DOTS strategy elements and deserve a special attention regarding quality control.

The bacterial diagnosis has improved after 2000. After a period of almost non-existent laboratory services in the districts, in 2000 the majority of laboratories in the districts and laboratories of the former lung diseases hospital were reconstructed and equipped.

Currently, due to the GF funds, 17 laboratories are in good physical condition and equipped with binocular microscopes and reagents sufficient for the bacteriological diagnosis of TB patients. Sputum is collected externally, near to the dispensary premises or at home from the patient. The laboratory network in Albania is composed of 17 peripheral laboratories that perform direct microscopy (Berat, Vlora, Lushnjë, Durrës, Pogradec, Lezha, Elbasan, Burrel, Kukës, Rreshen, Kavaja, Gjirokastra, Fier, Peshkopia, Shkodra, Korça and Tirana) and a National Reference Laboratory (NRLTB) located in the University Hospital of Tirana "Shefqet Ndroqi". The latter performs the culture and the susceptibility testing against first line antitubercular drugs (DST). Two of the above laboratories (the laboratory of Shkodra and of Korça) used to perform culture testing as well for *M. tuberculosis*, but now this culture testing is only performed at the University Hospital of Tirana.

All the laboratories should send the BK positive samples by mail to the NRLTB for confirmation and culture testing, but this does not happen in practice. One of the main aims of the NTP in the coming years must be to ensure a perfect system of transport of the samples collected from suspected patients from the peripheral laboratories to the NRLTB.

The percentage of cases detected with smear direct examination is high, approximately 64% of the cases with pulmonary TB and it is considered very good.

The number of laboratories in Albania is relatively high and it varies from one district to the other. There are big districts that include 200,000 inhabitants, but there are districts with less than 50,000 inhabitants. Currently, there is a big variety in the number of the examinations performed and this is not only dependant from the TB cases incidence, but also from the pulmonologists, who generally still rely mostly on the radiological diagnosis. Likewise, there are laboratories that detect only 3-4 cases a year and thus it is very difficult for them to maintain a good level of quality.

NATIONAL REFERENCE LABORATORY FOR TUBERCULOSIS (NRLTB)

The NRLTB administers 20 samples per day on average. Every sample is directly examined with a microscope and simultaneously cultivated in solid and liquid media. Each strain isolated for the first time is tested for susceptibility against first line TB drugs.

The NRLTB is equipped with a fluorescence microscope and 4 binocular microscopes. GF purchased 3 category II, B2 type biosafety cabins. Thus, the laboratory currently fulfils the international standards on biosafety.

In order to ensure the on-going quality and work safety with them it is important to carry out maintenance services once a year for these cabinets and to ensure continuous power supply by means of UPS equipment, as an unexpected electricity outage is very dangerous.

The solid Lowenstein-Jensen media are prepared in the laboratory. BACTEC MGIT 960 reagents have been purchased from the Ministry of Health. Susceptibility testing is performed for four antitubercular drugs (Isoniazid, Rifampicin, Etambutol and Streptomycin) by means of the proportion method.

During 2013-2014 there has been a drastic decrease in laboratory funds for reagents. This has caused an absence of the BACTEC MGIT system reagents in the laboratory during this period.
This has resulted in performing a limited quantity of drug susceptibility tests during 2013, whereas during 2014 those have been performed only for cases of recidive or specific cases.

The identification at the level of MTBC complex is carried out with immunochromatographic tests. Since 2010, the laboratory has conducted its identification by means of molecular methods LPA-line probe assays (Hain Genotypre Mycobacterium MTBC, a molecular genetic test for further differentiation within *M.tuberculosis complex*).
This was enabled during DRS (Drug Resistance Survey) which was performed for the first time in Albania during 2010, funded by GF, US Agency for International Development.
This test has been interrupted from the lack of continuous supply of kits, regardless that the laboratory has the capacities and a trained staff.
The identification at type level is performed with conventional methods (susceptibility against TCH and PNB, growth in 25°C). Niacin and Nitrates tests have been used as well. Currently, the laboratory is implementing the identification by means of molecular methods (Hain GenoType Mycobacterium CM kit, a molecular genetic test for the identification of the most important mycobacteria from the cultures, which will be used for the identification of *M. tuberculosis complex* and atypical mycobacteria. The types will be further differentiated by means of Hain GenoType Mycobacterium kit, if it will be necessary for clinical purposes. The GenoType MTBC kit will be used for further differentiation within *M. tuberculosis complex*.

The samples are registered and results of the direct microscopy (IUATLD scale), culture and susceptibility are entered in a register and in the electronic database.

Regarding quality control, the WHO and IUATLD have established a network of Supranational laboratories, which send a panel of isolates of *M. tuberculosis* for blind testing and susceptibility against Isoniazid, Rifampicin, Etambutol and Streptomycin. Since 1999, the NRLTB has established collaboration with the Supranational Reference Laboratory (Roma-Milan). In 2002 the compatibility for each drug was 90%. In 2005, 2008 and 2010 the compatibility was 100%, whereas in 2013 it was 90% for Isoniazid and 100% for Rifampicin.

Implementation of VNTR MIRU genotyping methods and Spoligotyping

The NRLTB has the capacities and a trained staff to perform genotyping tests based on PCR: Variable Number of Tandem Repeats of Mycobacterial Interspersed Repetitive Units (VNTR-MIRU)-typing.
Ensuring ongoing reagents remains a problem, in order for the data obtained from the genotyping to be at the service of patients on real time for timely detection of the possible epidemic outbreaks and the chain of illness transmission.

HIV INFECTION DIAGNOSIS

The NRLTB is equipped with the Abbott AxSYM System, which operates using the **Microparticle Enzyme Immunoassay (MEIA)** technology.
Approximately 100 cases of tuberculosis were tested in the laboratory by means of rapid immunochromatographic tests during 2013. The rest of the patients have been tested in the IPH.
There is a current attempt to test all TB patients, but due to technical problems and lack of reagents, this testing is not performed from the NRLTB. HIV testing is performed at the IPH.
In the majority of the peripheral laboratories, the performance indicators are low. The majority of them have a very low number of examinations per year, which makes it impossible to keep a high level of expertise for performing direct microscopic examination of the sputum.

FAMILY DOCTORS

They have been considered as an important part for tuberculosis control, even though until today they have not been included in concrete terms or by law in its control, despite that in the obligations of the family doctor in the contract with the Health Insurance Institute (HII) several tasks are mentioned. They contribute in the diagnosis of TB cases, when suspecting about it and refer the case to the dispensary. But their contribution to the

diagnosis of cases with tuberculosis results to be vague; however, these data are not verified. This happens due to his by-passing, not for professional reasons. During 2007 and until September 2008, thanks to the GF funds, 1375 family doctors and nurses have been trained on the basic TB knowledge and DOTS implementation. Thanks to the GF funds, 3583 family doctors and nurses have been trained at the end of 2012.

Family doctors do not get information for TB patients they have under their responsibility and currently they are not engaged in controlling their treatment or the close contacts.

Generally, family doctors are aware of their role in TB control in the future and are ready to collaborate for its diagnosis and treatment.

ANTI-TB DRUGS

Albania has never experienced the absence of drugs; however it still does not have a stable system of their procurement, storage and distribution. The latter has often resulted in experiencing the verge of their absence.

The drugs are procured and purchased from the University Hospital of Tirana with an open procedure tender, but often tenders fail as the drugs are not registered and the pharmaceutical companies are not interested to participate. We have a centralized system for drugs purchase and management.

Their purchase and management still bears problems, as still no qualitative or stable system has been established.

The NTP as part of the University Hospital of Tirana is responsible for their administration. The drugs are stored in the hospitals pharmacy and are distributed from the person in charge of the pharmacy according the requirements of the dispensaries.

Pursuant to the Albanian legislation, there are no anti-TB drugs in the ambulatory pharmaceutical network, but it has been verified that Rifampicin is sold under the counter, despite that there are instructions prohibiting its trade in the open pharmaceutical network.

MANAGEMENT OF VULNERABLE GROUPS

The following are considered vulnerable groups in Albania: the Roma population, Egyptian population, prisoners, the homeless, the institutionalized in chronic care institutions (nursing homes, psychiatric hospitals), people coming from areas with high TB prevalence in the outskirts of the capital and Durrës, drugs and alcohol users, miners, emigrants, HIV/AIDS affected people, patients with chronic diseases, pregnant women and the malnourished.

We do not have an exact figure for the Roma, Egyptian population and for the homeless, which makes it more difficult to define the incidence in these vulnerable groups.

Due to the GF funds, some of these segments of the population have also partly been subject to the active screening for the first time.

In the same framework active screening was carried out in all the prisons of Albania and Roma population, mainly in Tirana.

- The screening of 1684 prisoners carried out in the prisons premises showed that 48% of them had LTBI and 35% of them resulted in TST > 10 mm. This category was treated with INH chemoprophylaxis for 6 months.
- The screening of 1000 Roma people, mainly in Tirana, showed that 8% (82) of them resulted with a TST > 10 mm. This category was treated with INH chemoprophylaxis for 6 months.

The number of immigrants in Albania is low and still there is not policy on their control.
The case of the Albanian emigrants living outside the country is more problematic, especially of those living in Greece.
The Albanian emigrants who do not have regular documents in Greece are obliged to hide their illness as they are at risk of being deported and consequently not benefitting from the treatment with anti-TB drugs. Even in cases when they have access to the health care service, they might lose it due to the change of residence.
The number of emigrants diagnosed with TB, has increased over the last years, which is explained by high rates of their return, especially from Greece. The NTP is in continuous attempts to establish an exchange system of data with the respective programs of neighbour countries for TB patients.

THE POPULATION IN THE OUTSKIRTS OF TIRANA AND DURRËS

After the fall of communism there has been a massive displacement of the population from the north-eastern areas with high TB prevalence to the surrounding areas of Tirana and Durrës. This displacement has been more focused especially in two areas, in Bathore in the district of Tirana and former Këneta, in the district of Durrës. The population in these areas lives in difficult economic and social conditions and in overcrowded and poorly conditioned buildings. In order to help these inhabitants, the service of pulmonary diseases has been established in Bathore with a pulmonologist and nurses, which has played an important role in controlling TB in this area.

THE POPULATION FROM KOSOVO

A specific problem for our country is the free movement of Kosovars to Albania and vice versa. Kosovo is considered a country with high TB prevalence and their employment

mainly in public sectors such as hotels, restaurants and different shops might represent an added risk of infection for our population.

The entry of Kosovars in Albania may be periodic for different reasons such as business, education, etc., and seasonal, mostly including movements during the tourist season (mainly in the form of family tourism). This increases the probability of contact with infective TB patients, diagnosed or not, especially in the case of family tourism.

PRISONERS

Speaking of our country, the NTP has a good collaboration with the prison's hospital and the prisons doctors regarding the reporting of each case identified with TB and control of possible close contacts in prisons. The recording of prisoners with TB as a separate group has started in 2005. Data are reported at the NTP and recorded in the national register.

DRUG USERS AND HIV PATIENTS

The data of the last 5 years show that 5 patients have been diagnosed with TB which at the same time were drug users, a number which results to be low. We think that this number does not represent the reality because almost all these patients are reluctant to report regarding drug use. HIV prevalence is still low among drug users and thus the simultaneous infections with TB/HIV are rare. Despite the small number of cases, this is a group that must be considered as a most at risk group and a better collaboration is required mainly with the non-governmental organizations dealing with this group.

INFECTION CONTROL

Patients medical checks-ups are performed in joint facilities with other patients and consequently the disease can be transmitted during the diagnosis stage. This can happen in the waiting rooms, check-up rooms or in other facilities of health institutions.

There are no special regulations for the prevention of infection transmission in the facilities of dispensaries or policlinics. When a patient is diagnosed with TB, he is recommended to be hospitalized and the notification form is filled in.

The filling in of the notification form is done in every case, but often the quality how they are filled in is poor.

As a rule, hospitalized TB patients are kept in separate rooms, 5-6 patients per room in general.

There are no special wards for TB treatment and TB patients often move from one room to another.

The measures for controlling TB infection and preventing other patients to be infected from the TB patients in the former lung diseases hospitals are generally low and spontaneous. Masks are not used, except in the cabinet of bronchoscopy, but even in these cases those are not masks that protect from TB bacillus.

During warm seasons natural ventilation is used, leaving the windows open, which is impossible during the cold part of the year.
The measures for TB infection control must be strengthened even more, especially now that the treatment of TB patients in the districts has started.

TB IN CHILDREN

Diagnosis, treatment and prophylaxis of TB in children are performed by the paediatric care service, and apart from the reporting and supply with anti-TB drugs there is no other link with the NTP.
Children diagnosed with TB constitute a relatively low percentage, 1.4% but last two years there is an increasing trend in TB children.
We are of the opinion that children are under-diagnosed for two reasons: due to the difficulties that children represent for TB diagnosis and, second, due to the lack of qualified paediatric staff for this diagnosis.

FUNDING

Even though in theoretical terms the commitment of the governments for TB control is present, the actual political commitment is low. Albanian started the DOTS implementation since 2001, but the preparatory stage, the physical infrastructure reconstruction and provision with equipment have been done through foreign donations. Here we can mention the 2 million USD fund during 2000-2002 from the ECHO program of the European Community and a 1.2 million USD fund from the GF for 2007-2012.

The technical assistance and trainings on DOTS implementation and national policy drafting for TB control have been funded from foreign bodies, mainly the WHO. Policy development, supervision activities and other supporting activities are elaborated and implemented from the NTP, which currently is still part of the University Hospital of Tirana “Shefqet Ndroqi”.
There is has been no special funds for TB in three decades, but also funds that have been indirectly allocated for it have been continuously reduced after the 90s. This has been especially reflected in the reduction of the dispensaries staff, in the lack of funds for the purchase of PPD, in the lack of funds for services and per diems related to M&E activities from centre to base and in-district.

TB treatment is free of charge and is covered from the health insurance. A concerning problem is the non-payment of TB patients as invalids, at least during the period of treatment. TB patients benefit 1 year of invalidity payment or social assistance, but due to the legislation this treatment is not applied during the first 6 months, a period during which patients are under treatment. This is equally applied for the active and working age populations, but not insured, and for young people or children as well.

OUTCOMES OF INTERVENTION MEASURES

As a result of the measures taken for TB control during the last years, Albania has achieved satisfactory results. It has managed to implement the DOTS strategy throughout the country and today it is considered as a country implementing this strategy to a level of 100%. The last strategy for TB control in Albania has been prepared for 2009-2014 and has also considered the project funded from GF during this period. The objectives of this strategy were very ambitious and the majority of them have been achieved, apart from the decrease of incidence.

The following are the main achieved objectives:

- achieving and maintaining a high percentage of treatment success for positive sputum TB cases (> 90%);
- reducing and maintaining the mortality rate at figures < 5 cases per 100,000 inhabitants and
- > 75% detection of new cases with smear positive pulmonary TB.

The objective related to the incidence foreseen to be 10 cases per 100,000 inhabitants has not been achieved. Regarding this objective we have observed a considerable increase of the incidence, which is related to several factors mentioned at the beginning.

SWOT ANALYSIS

Strengths

Three mainstays on which the implementation of the new strategic plain is based include:

- Political commitment of the recently elected Government
- Qualified and generally sufficient human resources; and
- Good physical and logistic infrastructure for TB control

The new Government is committed in the fight against TB.
This is expressed in its readiness to revitalize the Committee on TB control, provide legislative support in compliance with the new health reform, and readiness to promptly solve the various problems that arise during the daily control and fight against TB.

Adequate legislation on TB control
Albania has adequate legislation, which of course has to be completed further with technical guidelines.
The first National Strategy on TB Control in Albania was drafted in 1999, and two other national strategies on TB control were prepared since then, respectively in 2006 and 2009. The National TB Control Program was published in 2002. Many other documents were published during this time, such as clinical and technical guidelines on TB management, brochures and leaflets for the patient, the vulnerable groups and general population.

Budget dedicated to first-line anti- TB drugs
The Ministry of Health has a separate line item budget for first-line anti-TB drugs and it also organizes their procurement. Consequently, the country has never faced problems related to the lack of these drugs.

The Albanian law on drugs has sanctioned the prohibition to trade anti-TB drugs in the pharmaceutical-ambulatory network
This holds back their use for other purposes, thus influencing the prevention of resistance to anti-TB drugs.

Quality, qualified and sufficient human resources (with some rare exceptions)
It includes pulmonologists, and other medical staff engaged in the fight against TB, but also family doctors and nurses serving in the ambulatory service.

A National Reference Laboratory with qualified and experienced staff, a proper laboratory network at national scale with properly trained staff

The National Reference Laboratory is properly equipped and operates following high technical standards, certified also by the Regional Surveillance Laboratory in Rome, having 100% susceptibility compliance to anti-TB drugs. The rate of cases detected by smear examination is high: around 64% (2013) of pulmonary TB cases. Additionally, the results of positive cultures have been quite high as of 2012, with a bacteriological confirmation rate of 60% of pulmonary TB cases.

A good physical and logistic infrastructure for TB fight is in place

Almost all dispensaries have been reconstructed, and are properly maintained and operational. We have a good laboratory network for the direct smear diagnosis at national scale, which has been established over the last 15 years. Furthermore, proper radiological logistic is in place almost throughout the country. All districts of the country have radiology equipment and all regional hospitals have been equipped with computed tomography. The Government is committed to the maintenance of infrastructure and logistics in these centres.

The DOTS strategy is implemented countrywide

Albania started the implementation of DOTS in 2001 in two pilot districts, and in 2009 it implemented all the main elements of DOTS nationwide.

A good information system based on individual data and a very detailed notification form of TB cases

The variables recorded and used are suitable for monitoring TB control performance and the epidemiological study of data.

Satisfactory epidemiological indicators:

- Albania has a very high percentage of TB detection. According to WHO estimates more than 80% of TB cases at national scale are detected.
- Positive treatment results, with treatment success rate around 90% of cases.
- Low recidive rate: < *5%* of all cases.
- Low TB drugs resistance and particularly MDR: < *1.2%* of all TB cases.

WEAKNESSES

Difficulties in the practical enforcement of legislation and regulations on TB control.
These difficulties are related to the political and administrative instability. Additionally, Albania has been characterized by a long transition period, marked by the demotivation of employees to fulfil their tasks.

Lack of staff for the National TB Control Program
The NTP is composed of an epidemiologist working full-time, and three physicians working part-time, while it necessitates staff composed of at least three people working full-time and a team of experts working part-time. Experience has shown that the pulmonologists assigned at the NTP tend to attend to clinical issues rather than to the defined tasks.

Failure of the MoH to allocate a special budget for the main TB control activities
The allocation of a budget dedicated to the main TB activities by the MoH is a problem to which no solution has been found, regardless of the continuous recommendations of the WHO and other TB experts. It has been almost three decades that there is no special fund for TB, and additionally the funds indirectly allocated for TB have been decreasing since 1990. The Ministry of Health allocates the budget to the hospitals and districts for all services as a whole. This has resulted in harming the basic TB control activities.

- Lack of funds for the purchase of reagents and consumables for bacteriological examinations. This has jeopardized the normal functioning of bacteriological laboratories such as: direct smear examination, culture or drug susceptibility testing.
- Lack of funds for the purchase of the PPD, which has led to the inability to detect latent TB infection, control close contacts and perform chemoprophylaxis.
- Lack of funds for services and per diems regarding monitoring from the centre to the base, and within the district. Consequently, monitoring and supervision activities have not been conducted after the completion of the GF funded project.

Failure to register anti-TB drugs
The failure to register anti-TB drugs accounts for many difficulties related to their procurement, avoidance of competition and being very often to the brink of remaining without drugs.

There is no specific budget for second-line anti-TB drugs, and the latter are lacking
The lack of second-line drugs has resulted in those affected by MDR not receiving treatment, becoming in most cases a source of infection for the others, and waiting a fatal end.

Vertical organization of TB control in Albania

This implies a system closed within the pulmonology speciality. Frequent efforts have been made to integrate it in primary care or to involve the family doctor in TB control, and particularly in providing treatment during the continuation phase, but they have all failed. As incidence has declined so has the interest of pulmonologists in TB, and family doctors do not even think of TB.

Organization of dispensaries and reduction of dispensaries nurse staff in some districts

Lung dispensaries are subordinate to hospital directorates, but recently there have been some districts which passed under subordination of the primary care. This leads to confusion and failure to operate properly. Decline of TB prevalence has resulted in the reduction of nurse staff in the dispensary, and consequently many tasks, particularly those related to DOT, are not implemented.

Nurse staff reduction in some districts' dispensaries

Nurse staff reduction in some districts was not in line with the number of TB cases, which has a direct impact on the failure to fully implement the DOT.

Pulmonologists are not paying proper attention to TB related problems

Due to the decline of incidence pulmonologists do not pay the necessary attention to TB related problems. They are increasingly focused on clinical matters and other lung diseases, such as COPD, cancer, asthma, other pulmonary infections, leaving TB aside. They are usually interested solely in giving the diagnosis and close contact control and less engaged in other problems such as DOT implementation or other prophylactic, educational activities, etc.

Unequal geographic distribution, with major differences in the incidence of TB cases between various geographic regions.

North-eastern areas, characterized by socio-economic problems and major medical deficiencies related to staff and infrastructure still have high incidence and other problems related to TB management.

Inadequate distribution of human resources and recruitment of unqualified staff

Areas where TB incidence is high are characterised by lack of staff, even medical staff, but fortunately these areas are few in number (currently there is one district that has problems related to the lack of pulmonologists, and two other districts may face problems in the future if proper measures are not taken). These districts are located in the north-east of the country. These are poor areas, with bad medical and road infrastructure.

Very often unqualified medical and nurse staff is recruited.

Failure to properly implement the DOT, particularly during the continuation phase

Efforts have been made to include the primary care, but they have been unsuccessful. DOT cannot be implemented without the involvement of primary care or the Albanian Red Cross.

Greater reliance on imaging as compared to bacteriological evaluation for TB diagnosis

Despite the raising awareness of pulmonologists on the role of bacteriology for TB diagnosis and increase of bacteriological diagnosis percentage over the last years, pulmonologists still have excessive confidence in radiological examination and they tend to perform expensive examinations such as CT or FBS. These results in higher costs and delays related to TB diagnosis. It is very difficult to change doctors' attitude towards bacteriological diagnosis.

Diminishing expertise related to bacteriological diagnosis in some districts

This is related to the low number of bacteriological examinations in some districts. With the exception of 7 districts with sufficient number of examinations to maintain a satisfactory level of expertise, the number of examinations of samples taken from TB cases in other districts is very low to maintain good expertise.

Reduction of hospitalization days for patients and very often they are discharged without the conversion of BK positive pulmonary TB cases to BK negative

Under the conditions of our country it is necessary to keep pulmonary TB cases, particularly sputum smear-positive ones, hospitalized until their conversion to sputum negative. However, this is not the case due to the lack of beds for TB patients.

Lack of policy for the management of vulnerable groups

This is mainly related to the lack of funds and tradition support for vulnerable groups. Until recently we had a unified control policy targeting general population. TB cases facing socio-economic problems do not receive socio-economic support, and very often these patients become marginalized.

There is no personalized treatment with regards to socio-economic support for those affected by TB.

A great concern is the screening of close contacts of TB patients. The national legislation does not provide for close contact screening free of charge if people are not insured. Thus, most of contacts are not controlled, or diagnosed, even if they have TB or are infected and need chemoprophylaxis.

Isoniazid Chemoprophylaxis is not implemented.

Isoniazid chemoprophylaxis is not implemented as funds for the purchase of PPD are lacking. There are no chemoprophylaxis guidelines, and practical implementation of daily administration constitutes a problem.

Lack of regulation and special measures for the prevention of MDR and other airborne infections in health care institutions

No second-line drugs, nor physical infrastructure are available for the treatment of MDR-TB patients. This issue has become highly sensitive particularly now as TB is being treated not only in three hospitals, but in all hospitals of the country. In some instances even simple measures like isolating sputum smear-positive patients in separate rooms are not implemented, with these patients being treated together with other patients. This phenomenon can become worse particularly now that those affected by TB are being treated in the districts' hospitals.

Under-diagnosis of paediatric TB

The number of TB cases in children is very low, but we believe that we are in front of an under-diagnosis of TB cases in children. TB in children is almost left outside the NTP. Diagnosis, treatment and prophylaxis of TB in children are performed by the paediatric care service, and apart from the reporting and supply with anti-TB drugs there is no other link with the NTP.

In the last 5 years children diagnosed with TB constitute a relatively small percentage: *1.4%*.

We are of the opinion that children have been under-diagnosed for two reasons:

- Difficulties in diagnosing TB in children due to their peculiarities.
- Lack of qualified paediatric staff nationwide and lack of a TB diagnosis system.
- Paediatricians have never been trained on DOTS and TB.

Negative trend of the epidemiological situation

This was noticed during last year and is a serious indicator that should be taken into account, as for 7 consecutive years we have seen only a decline of incidence, and this is the first year in 7 years that we are facing an increase.

This is reflected by:

- The presence of many TB cases among the young, 15-34 years, which indicates that there is active, undiagnosed TB in the community.
- Increase of paediatric TB, observed last year.

Insufficient cooperation between TB and HIV program

Although better cooperation was established during the 5th Rnd of the GF, continuity of cooperation could not be achieved.

Insufficient level of Continuous Medical Education of medical staff

Regardless of the establishment of the National Centre of Continuous Education, trainings are conducted to the benefit of pharmaceutical companies rather than for the real needs of medical staff. TB is not on the agenda of pharmaceutical companies and trainings in this framework are missing.

OPPORTUNITIES

Greater support and commitment of the newly elected Government for the implementation of the Strategy on TB control for 2015-201.

Inclusion of TB control activities in primary care and ensuring a budget dedicated solely to TB activities

This is one of the greatest challenges of the strategy. The health care reform and decentralization of health care services can be used to this end. The budget deficit for the first three years may be covered by the GF, and in the meantime the Government can undertake the gradual budget increase until full coverage.

Detailed definition of the role and responsibilities of the family doctor and primary care nurses regarding TB control and treatment

This is very important in the framework of the reform. The family doctor must be involved in TB control, both during the diagnosis and also during the treatment and prophylaxis. Family doctors, having well-defined terms of reference, will be responsible for treatment during the continuation phase; they will assist in close contact control and in the chemoprophylaxis.

Involvement of districts' epidemiologists in TB control

Highly important is also the involvement of epidemiologists from the districts in TB control. This cooperation must be reinforced in the centre, i.e. at NTP and Institute of Public Health level, and shall continue further at the basic level. As with the family doctor, responsibilities and cooperation with epidemiologists must be clearly expressed in a regulation.

Drafting a strategic plan for human resource development

This plan should be prepared based on the assessment of human resources in the health care system, including the area related to TB control activities, with a focus on Health Care System reorganization trends; the place of TB control activities; provision of new staff guidance by the TB network, etc. with a view to strengthening TB laboratories and ensuring properly trained staff regarding TB control activities, able to prevent and control

any potential TB outbreak or the reappearance of the TB epidemics in Albania in the next decades.

Distribution of medical staff involved in TB control as per the needs

The Government must take measures for the distribution of medical staff according to the needs, particularly in the poorest and most problematic areas regarding TB.

Implementation of PAL strategy

Improvements in TB detection as well as better diagnosis and treatment of pulmonary diseases by the Primary Care shall be achieved through the implementation of the Practical Approach to Lung Diseases Strategy.

PAL strategy implementation shall:

- Impact the strengthening of the health care system in general, and the diagnosis and treatment of respiratory diseases in the ambulatory service in particular.
- Deliver an integrated approach to respiratory diseases.
- Significantly improve the massive misuse of antibiotics, which is a major concern in Albania, by influencing their prescription by family doctors and pulmonologists in the ambulatory service. Consequently, it shall have an impact on the prevention of bacterial resistance, high costs for the society and other harms antibiotics cause to the community.

Revitalization of monitoring and supervision visits

This activity is vital for the NTP well functioning and the Government must support this activity with staff, logistics and funds.

Improvement of TB bacteriological diagnosis to cover the entire country

This is one of the most important components of the new strategy. This will be achieved by reorganizing the bacteriological laboratory network in order to have higher quality and faster diagnosis, by increasing the diagnostic capacities of the National Reference Laboratory and reducing MDR diagnosis time through the GenXpert MTB/RIF. The bacteriological diagnosis and culture must be performed for each suspected case, by having in place a reliable transportation system for sputum samples countrywide.

Registration of first-line anti-TB drugs and establishment of a reliable and sustainable system for their procurement, management and distribution

It is important that this issue finally finds a legal solution.

Ensuring second-line anti-TB drugs and establishment of the necessary infrastructure for MDR-TB treatment

A dedicated budget for second-line drugs is needed. MDR and other airborne infection prevention in health care institutions is gaining special importance, particularly now with the closure of lung disease hospitals and treatment of TB patients in the districts.

Large scale iimplementation of Isoniazid chemoprophylaxis

Isoniazid chemoprophylaxis must be a priority in the new strategy, and the range of those being examined must be expanded. Apart from detecting TB infection in close contacts it is important to screen other high risk groups for the development of TB disease.

TB treatment in the districts

We believe that this will bring about advantages in TB control. This shall establish better relations between the medical staff in the districts and TB patients and their family members, thus influencing on better control of close contacts of TB patients. However problems may arise in the first years related to diagnosis, infection control and their treatment, therefore training of medical staff in the districts and supervision visits from NTP staff must be frequent.

Personalized treatment of TB cases

Cases that do not have social support and are at risk of not receiving treatment on daily basis will be provided social and financial support according to a special program. Involvement of other partners such as the Red Cross, health insurance, municipalities and communes, will be needed to this end.

Special focus given by the NTP to vulnerable groups

A sustainable cooperation system must be in place with the National HIV Program and other NGOs. The issue of invalidity benefits from the start of the treatment must find a solution. In turn we will use this as an incentive and thus control administration of the treatment. Currently TB patients who pay health insurance are entitled to 1 year invalidity. However this will be granted only after 6 month of treatment. Those who are not insured shall not be entitled to benefits. For those who are not insured we will try to include patients facing social and economic hardships in the social support scheme.

Drafting guidelines

Guidelines will be drafted for: Contact tracing for close contacts of TB patients; INH chemoprophylaxis; Diagnosis and treatment of TB in children; Extrapulmonary TB; Control of TB infection in health care institutions.

This will be achieved during the first two years as these guidelines currently do not exist.

Conduction of operational research

Operational research will be conducted for a period of five years regarding the main TB related problems in the country. This research will have an impact on the drafting of health policies for TB control and improvement of the epidemiological situation. This research shall include: Study of TB disease prevalence in the country; Study of gender related differences in TB morbidity; Study on TB strains genotyping and innate immunity of Albanians to TB; Assessment of the TB infection index in the country.

GF contribution would be necessary in order to achieve some of the abovementioned components, particularly under the conditions of the economic crisis our country is facing.

Above all, we hope for sustainable economic growth so that the deficit hoping to be covered by GF for the first three years of the NSP can be covered in the future by the state budget, thus allowing for the continuity and stability of TB control in the country.

THREATS

Current socio-economic situation of the country

The present situation is marked by the lack of economic growth and an immense government debt, both influencing directly the budget allocated for TB and increase of poverty which affect first of all vulnerable groups and those who receive less social protection.

Payments under the table

Payment under the table is still a concern and constitutes a considerable part of health related expenses for the population. In general TB patients represent the most disadvantaged groups of the population and this payment is a great burden for them, very often depriving them of health care services.

Economic crisis in the neighbouring countries, Greece and Italy

This crisis has affected first of all emigrants and particularly Albanian emigrants. Most of them are returning to their country, are unemployed and uncovered by health insurance. In general they are young adults or children, which represent one of the most affected age group by TB in our country, that is why they are considered a particular vulnerable group.

The likelihood of negative impacts in the framework of an accelerated health care reform and decentralization of health care system

This possibility is present if proper measures for the prevention of these factors are not taken. The latter should also be considered as an opportunity for improving TB control.

The establishment of the reference system in the recent years has affected the access of TB patients in the health care system. Usually patients with respiratory problems would traditionally go directly to the dispensaries of lung diseases or lung disease hospitals. Nowadays they are forced to go to the family doctor, but the knowledge and expertise of the latter on TB diagnosis are not adequate. This is a concern not only for those with respiratory problems who have difficulties in accessing TB services, but also for contact tracing. Even close contacts of TB patients should pass through the reference system as well, which very often is not achieved due to the lack of service coverage by the health insurance.

Wrong impression that TB does no longer constitute a problem and a threat to public health

Due to the stable TB epidemiologic situation over the last years, this impression has flourished both among medical professionals and Government representatives. This has led to the reduction of attention and political commitment of the Government, and doctors in general, and to fewer funds for TB control.

However, we believe that this is not the case for Albania, since we do not have a consolidated health system and very often we encounter problems even with the enforcement of the existing legislation and program. The health system in Albania is still fragile and it has many problems related to coordination of actions. On the other hand, reduction of incidence does not imply the allocation of fewer funds to TB, on the contrary, maybe funds should increase because more expertise is needed to detect and manage properly a TB case. This is also related to the fact that family doctors never suspect the presence of this disease, and even specialized doctors are increasingly leaving it out of their focus.

Free movement of Kosovars to Albania and vice-versa

These movements can somehow be considered a threat to the NTP. Kosovo is considered a country with high TB prevalence and their employment mainly in public sectors such as hotels, restaurants and different shops might represent an added risk of infection for our population. The entry of Kosovars in Albania may be periodic for different reasons such as business, education, etc., and seasonal, mostly including movements during the tourist season (mainly in the form of family tourism). This increases the probability of contact with infectious TB patients, diagnosed or not, especially in the case of family tourism.

Expanding Pulmonology private healthcare.
This trend is observed in the recent years, and private medical service is represented mainly by retired pulmonologists, but also by private clinics or hospitals having pulmonologists or other doctors performing the tasks of the pulmonologist. If no measures are taken for their inclusion in TB control, they may have a negative impact.

Drafting the national strategy for TB control for 2015-2019 is necessary also because Albania this year is a candidate to apply in the GF, and under this context this strategy takes into consideration the financial assistance of the GF as well.

The publications and recommendations of the WHO and KNCV for the countries of Europe with low and average incidence were taken into consideration for drafting the strategy, such as: "Plan to stop TB in 18 high-priority countries in the WHO European region, 2007-2015" a document published by the ECDC; "Framework action plan to fight Tuberculosis in the European Union" published in 2008; document published by WHO, IUATLD, and KNCV; "European framework for Tuberculosis control and elimination in countries with a low incidence" and "Tuberculosis Handbook" published by the WHO in 1998; "Implementing the stop TB strategy", a handbook on National Tuberculosis Control Programmes, WHO 2008; "Contributing to Health System Strengthening", Guiding principles for National Tuberculosis Programmes, WHO 2008; "Practical Approach to Lung Health (PAL)", WHO 2005; "Guidelines for the prevention of Tuberculosis in Health Care Facilities in resource-limited settings", WHO 2009; "The stop TB strategy", WHO 2006 and "Millennium Development Goals" and Draft global strategy and targets for tuberculosis prevention, care and control after 2015.

The new strategy for 2015-2019 is believed to find a solution to the abovementioned problems, preserve and consolidate the achievements made so far in the fight against TB in Albania and lead the country toward the elimination of TB.

The strategy will aim to implement the following general objectives:

1. Pursue high-quality DOTS enhancement
2. Addressing TB close contacts, the needs of vulnerable and poor people, MDR-TB and TB-HIV
3. Ensuring large scale TB infection control in Albania
4. Contributing to health system strengthening based on primary health care
5. Empower people with TB, the community and all medical suppliers by establishing partnerships.
6. Enabling and conducting local operational researches on TB.

The Goal of the strategy:

- **Consolidate the achievements made so far in the fight against TB and lead the country to the stage of TB elimination by the end of 2019.**

Objectives:

1. Ensure quality health care service for all TB patients.
2. Reduce human suffering and social-economic burden of TB.
3. Protect groups that are vulnerable to TB, TB/HIV and MDR.
4. Protect and promote human rights in TB prevention, treatment and control.

Specific objectives:

- Maintain TB incidence < 15 new cases for the next 5 years.
- Maintain TB mortality prevalence < 0.5%.
- Maintain MDR prevalence < 2%.
- Maintain a high success rate for treatment of TB cases with sputum smear- positive (over 90%).
- Achieve a high level of TB case detection: > 80% of new TB cases.

1. **Pursue high-quality DOTS enhancement**

1.1 continuous political commitment of the Government to increase human and financial resources, in order to turn TB control into a national activity, and include primary health care service in TB control.
1.2 detection of TB cases throughout the country by means of fast and quality bacteriological and radiological examinations.
1.3 standardized treatment, supervised during the intensive phase and with the provision of social support to the patient
1.4 establishment of a reliable system for the supply and distribution of anti-TB drugs.
1.5 establishment of a recording and reporting system, that will allow for the evaluation. of treatment results for each particular patient, assessment of the overall programme performance, assessment and monitoring of results' measurement.

2. **Addressing TB close contacts, the needs of vulnerable and poor people, MDR-TB and TB-HIV**

2.1 systematic control of close contacts of TB patients.
2.2 addressing the Roma, prisoners, and other groups at risk.
2.3 prevention of TB infection, other airborne infections and MDR control.

2.4 implementation of joint TB-HIV activities.

3. **Ensuring large scale TB infection control in Albania**

3.1 Performing large scale chemoprophylaxis.
3.2 Drafting national guidelines on chemoprophylaxis.

4. **Contributing to the Health System Strengthening based on Primary Health Care Service**

4.1 achieve quality implementation of PAL.
4.2 contribute to health policies, human resources, provision of health care services and the computerized system.

5. **Empower people with TB, the community and all medical suppliers by establishing partnerships**

5.1 follow a public approach, without excluding private health care services.
5.2 ensure international standards on TB care.
5.3 involve the community in TB care and prevention.
5.4 provide the TB care card for TB patients.

6. **Enabling and conducting local operational researches on TB**

Gap analysis

1.1. Inadequate political and financial commitment of the Government

Although Albania has in place adequate legislation, a strategy and a National Program on TB Control dating since 2002, often the country faces difficulties with their enforcement. The Ministry of Health is the central body in charge of TB control. The National Committee on TB Control used to operate at this Ministry until 2007, but as of this year the Committee has not longer convened. Proper reorganization and operation of this Committee is vital to TB control in the country.

Very often decisions of key importance that can have a great impact on TB control, such as the closure of lung disease hospitals and their conversion to general hospitals, the establishment of a reference system for patients with respiratory problems, etc. were made without preliminary consultations with the stakeholders and the NTP. The Ministry of Health and Health Insurance structures should not make important decisions that affect TB control without first consulting the stakeholders.

Government commitment must be expressed by ensuring the necessary infrastructure for TB control, which consists in financial support, human resources and other services. The Government must ensure an effective guidance at national scale and adequate legislation supporting the strategy for the improvement of TB situation to the extent that Albania gets on the path to its elimination.

Insufficient management and supervision capacities at NTP level

The NTP is the main body guiding the fight against TB. This body has well trained and experienced staff; however these staff is not enough for fulfilling its tasks. Currently the NTP is composed of one epidemiologist working full-time, and three other doctors working part-time. The restructuring of this body is indispensable, and apart from part-time doctors it is necessary that it includes other full-time staff. Doctors working full-time should not be pulmonologists, but public health employees because experience has shown that once they are appointed at the NTP these doctors go to work in clinics. This additional staff must have well defined tasks, and should cover problems related to logistics, management of drugs, training, health care education, coordination of activities with other programs such as HIV, etc.

The NTP must exist as a separate unit, subordinate to the Ministry of Health, with staff approved by the latter.

The relation between the NTP and other health care services both at central (Ministry of Health, Institute of Public Health) and peripheral level with ambulatory service and other public health institutions is defined neither by regulation nor by law. Most of the tasks and duties are performed ad-hoc; there are no job descriptions and incentives for supervising and managing TB.

Lack of a specific budget dedicated to TB

We do not have a budget specifically dedicated to TB at national scale, but the budget is allocated to hospitals without being detailed for other TB activities. Thus the budget for TB is left at the mercy of heads of local structures. Recently the NTP lacked financial and logistic support for performing supervision and monitoring activities. It is indispensable that the Government allocates a budget dedicated specifically to the coverage of basic TB control activities. This budget should cover the main TB control activities such as purchase of drugs, reagents and consumables for the laboratories, activities related to surveillance and monitoring, chemoprophylaxis, infection control and support to vulnerable groups.

The Government should gradually increase the budget, from year to year, so that by the end of the third year it can take over all the expenditure related to the main activities of the strategic plan.

Establishment of an sustainable system for the procurement, purchase and management of drugs.

Anti-TB drugs are still unregistered, although in the recent year we have had a budget line dedicated only to them. Failure to register these drugs prevents competitions and may also harm their presence in the market. The Ministry of Health must take measures for the registration of first-line drugs. One person at the NTP should be in charge of the management of TB drugs, their timely procurement, at the required quality and quantity, by also creating the necessary stock, also taking care of other details related to the demands from the periphery to the centre, and their storage and usage.

Improvements to the legal framework

With constant decline in TB incidence, the existing "vertical" system for its control has become insufficient. TB activities must necessarily be included in the primary health care service, and it is important that the main activities are planned, coordinated, supervised and assessed by NTP employees.

The legislative framework indicates the Government's commitment, and it should be expressed with the improvement of the respective legislation according to the stage of the health reform and TB control. Important elements of the legislation need updating and additions, including: mandatory reporting of TB cases by doctors and laboratories;

mandatory supervised treatment for pulmonary TB cases; mandatory close contact tracing; free of charge service and treatment for all patient categories; coverage of expenses by the health insurance; granting invalidity as of the start of treatment for TB patients and not after six months, regardless of the age, and restriction of Rifampicin in the pharmaceutical market. Additionally, the issue of patients who default or transfer out must also be addressed.

Immediate amendments to the legislation are needed regarding contact tracing for close contacts of TB patients. Uninsured patients have to pay for radiological examinations, PPD and smear examination, and this should be governed by law. Moreover, even suspect TB cases cannot benefit from the above examinations if they are not insured, and they are often diagnosed at advanced stages of the disease when they constitute a medical emergency. Both these issues must be solved by law.

Another problem that needs a solution is the unification of dispensaries subordination. Anti-TB dispensaries conduct mainly primary care service; however, considering the peculiarities of hospitals organization in Albania, they should be subordinate to hospital directorates.

Insufficient and unevenly distributed human resources.

Drafting a strategic plan for human resource development

No strategy on human resources exists and differences are observed between districts. Worse still, in districts with high TB incidence specialised TB medical staff is missing, particularly pulmonologists, while in districts with no morbidity, the staff is excessive. A clear strategy on human resource development must be in place, and this plan should be drafted at the higher levels, including: Government, Ministry of Health, Ministry of Education, Ministry of Justice, Faculty of Medicine, etc. An expert working group will be established accordingly. The working group will conduct the analysis and assessment of the current human resource (HR) situation in the health care system in Albania, in the area of TB control-related activities, and it shall work and provide decision-makers with a strategic plan on HR development.

The strategic plan shall be prepared based on the assessment of human resources in the health care system, including the area related to TB control activities, with a focus on Health Care System reorganization trends; the place of TB control activities; provision of new staff guidance by the TB network, etc. with a view to ensuring properly trained staff regarding TB control activities, able to prevent and control any potential TB outbreak or the reappearance of the TB epidemics in Albania in the next decades.

The family doctor must be included in TB control, both during the diagnosis and also during the treatment and prophylaxis. Family doctors, having well-defined terms of reference, will be responsible for treatment during the continuation phase; they will assist in close contact control and in the chemoprophylaxis.

Of importance at the current stage of the TB epidemiological situation is the involvement in TB control of epidemiologists of the Institute of Public Health and those in the districts, apart from primary care service. They shall have clearly defined tasks for close contacts control, follow up of patients who default or transfer out without providing an address, infection control in health care institutions, and prevention of potential epidemic outbreaks. Likewise, they shall assist sputum smear-positive cases who reject hospitalization.

All TB related services, either diagnostic or curative, must be provided free of charge from health insurance.

1.2 ENSURING MEDICAL ACCESS FOR ALL AND NATIONWIDE FOR A FAST AND ACCURATE BACTERIOLOGICAL AND RADIOLOGICAL DIAGNOSIS

Inadequate access to health care services.

Cases clinically suspected with active TB are given support with laboratory and radiological examinations. Direct smear diagnosis in 2013 in Albania was 64% for pulmonary cases, whereas for 2012 this figure was 60% . This is significantly lower than the 80% target set by the ECDC.

Bacteriological examinations do not provide country coverage, they are not conducted on a continuous basis and they are not fast.

Due to the funding of Rnd 5 of the GF all the bacteriological network in the country has improved and the NRLTB has strengthened to provide higher quality diagnosis. However many peripheral laboratories do not perform the required number of examinations, and thus they cannot maintain the necessary expertise.

For the first time in the history of the country, cultures and TB drug susceptibility tests were not conducted last year. This is related to the lack of funds and the conversion of the lung disease hospital into a regional hospital.

The budget for the NRLTB and peripheral laboratories should be a separate line item budget and centralized too, since the amount of reagents and consumables purchased by the districts is very low and their procurement also represents a problem.

Bacteriological culture is performed in solid Lowenstein-Jensen media prepared in the laboratory, while BACTEC MGIT 960 reagents were purchased by the Ministry of Health as of two years ago. Susceptibility testing is performed for four antitubercular drugs (Isoniazid, Rifampicin, Ethambutol and Streptomycin) by means of the proportion method.

Detection and performance of fast bacterial susceptibility testing is indispensable for prompt and accurate treatment of TB cases, particularly those with MDR. The number of MDR cases in Albania is not high, however under the current conditions with patients being treated in general hospitals and not in special wards, the risk for an undiagnosed MDR-TB patient to infect other patients or medical staff is very high. To this end, the purchase of *GenExpert* MTB/RIF is indispensable.

Molecular typization allows for the detection and prevention of transmission between patients and also supports the management of cases and epidemic outbreaks. These examinations have been performed in our country for many years, however often funding is lacking for their regular performance, and they were conducted with the support of foreign partners. Continuing the performance of these examinations is very important for the reduction of transmission cases.

Improvement of TB bacteriological diagnosis is considered as one of the main objectives of the 2015-2019 strategy. This will be achieved by building diagnostic capacities of the NRLTB, fast MDR diagnosis, nationwide coverage with bacteriological diagnosis, establishment of a reliable transportation system for sputum samples from the periphery throughout the country to the NRLTB. Laboratories that do not reach the number of examinations necessary to keep their qualification shall be closed and sputum samples shall be sent to the NRLTB.

Bacteriological examinations must be of high quality, fast and ensure country coverage. All diagnosis and treatment procedures must be free of charge.

Diagnosis improvement through radiological examination and other supplemental examinations (CT, FBS)

Radiological diagnosis is an important examination for TB diagnosis in our country. An adequate radiology network is in place in our country, recently completed with radiology equipment and computed tomography, almost in all districts. Pulmonologists are properly qualified and have good expertise in radiological diagnosis. Often, apart from examinations with routine chest radiography, computed tomography (CT) or even bronchoalveolar lavage are necessary in some cases, for TB confirmation.

The lack of radiology films is often a concern and fluoroscopy is still used. Therefore, planning and purchase of radiology films in sufficient quantities is of high importance for the performance of this examination.
HII does not cover CT and FBS for cases suspected with TB who are not insured, and this must be stipulated by law.

Delayed TB diagnosis and often at advanced stages

Diagnosis in the majority of TB cases is delayed, often after more than three months. This leads to morbidity, mortality, rise of TB transmission and increase in treatment costs. Delayed diagnosis puts a heavier burden on social inequality, as it often occurs among the poorest and vulnerable groups.

Diagnosis delays relate to the character of the disease, failure of the patients to pay proper attention to the symptoms, the stigma that is often present, but also to the insufficient knowledge of family doctors and sometimes the negligence or inadequate level of expertise among pulmonologists. As previously mentioned TB cases are not high in number, therefore this disease is receiving less attention, and often TB cases are diagnosed too late and in advanced stages.

Raising the awareness of vulnerable groups and groups at risk about overcoming the stigma and paying attention to the symptoms is important for reducing diagnosis delays.

Awareness raising and training of medical staff, nurses, family doctors and pulmonologists should focus not only on TB but also on other pulmonary diseases, as the latter are wrongly diagnosed and mismanaged.

1.3 STANDARDIZED AND SUPERVISED TREATMENT DURING THE INTENSIVE STAGE AND SOCIAL SUPPORT TO THE PATIENT

Treatment following hospital discharge is not compliant to DOT and MDR cases do not receive treatment

Treatment outcomes were positive, treatment success rate was about 90% in the five recent years, however it should be underlined that in the last two years treatment outcome in the country has not been verified. Differences are observed between districts and even within the same district, and from year to year. Nurses in health care institutions supervise treatment administration by the patients, but once they are discharged from hospital DOT is not implemented. Severe extra pulmonary cases often need a multidisciplinary approach which in practice is not conducted.

Treatment success rate must be high in order for patients to cure and also to prevent TB and MDR infection from spreading. Treatment regimens are based on WHO's and IUATLD's DOTS Strategy, and they are standardized throughout the country.

Second-line drugs are lacking despite their purchase being planned for 2009; however their procurement and purchase failed due to the lack of funds, although Albania is a signatory to the Berlin Declaration and a candidate to the EU. We are of the opinion that we can begin by the start of 2016, after drugs are provided and the necessary physical infrastructure is put in place. However we will face difficulties in MDR management since their number is small, and currently we do not have any staff that is trained on treatment and management of side effects of drugs.

DOT is still a problem. Until now the latter was implemented only in lung disease hospitals, as a rule only during the first month or only until conversion to sputum negative. With the closure of these hospitals proper DOT implementation in all hospitals where TB is treated has become indispensable, including the continuation phase after hospital discharge. TB patients in district hospitals have received expedited treatment; therefore pulmonologists and particularly nurses may need some time to familiarize with the DOT, the side effects of TB drugs and other treatment related problems. After hospital discharge DOT can be implemented in cooperation with primary health care service, at the closes health care centre, and we believe that cooperation with NGOs is necessary.

Patients who leave without providing an address are increasingly becoming a problem. To achieve at least 98% of efficiency in putting cases under treatment, and in order for 95% of treated cases to complete the necessary treatment cycle within the defined deadline, it is necessary to establish a system for tracing those patients who default and transfer out. Primary health care service staff must cooperate in the follow up and detection of cases together with epidemiologists in the districts.

1.4 LACK OF A RELIABLE SYSTEM FOR THE SUPPLY AND DISTRIBUTION OF ANTI-TB DRUGS

Anti-TB drugs in our country are not registered and we lack a reliable system for the procurement and management of anti-TB drugs. Some pharmacies do not enforce the instruction of the Ministry of Health on the trade of anti-TB drugs in the open pharmaceutical network, specifically Rifampicin. Anti-TB drug supply and other supplies should be procured on time and in the required amounts. Difficulties related to procurement, storage and distribution in districts must be overcomed.

Logistics at central level should cover anti-TB drugs, laboratory materials and reagents, PPD, registers and recording and reporting forms. One person, a nurse who has completed higher education, shall be in charge of logistics, including drug management.

1.5 ESTABLISHING AN EFFECTIVE SYSTEM OF SUPERVISION, FOLLOW UP AND ASSESSMENT

A sound and quality data system ensures the basis for understanding the TB epidemiology in the country. This is necessary for the proper control of TB activities, and their monitoring. This includes the description of trends and bacterial resistance, identification of high risk groups and transmission, as well as identification of potential epidemics outbreaks. Supervision visits enable collection of information on the performance of TB control activities, including the monitoring of treatment outcomes.

Our recording and reporting system in based on local registers data and the TB case notification form. These data are sufficient as they have been updated continuously; however there is still room for improvement. Then, these local data are uploaded in the NTP software. Laboratory data on smear, culture and bacterial resistance are added to local data. These data are then sent to local dispensaries, but not to the family doctor and local epidemiologists. The main epidemiological data are reported to the Institute of Public Health annually.

It is important to have a national supervision system and to have these data entered into this system. In the meantime it is necessary that this data be forwarded to heads of local public health structures and family doctor.

Program assessment is defined as the evaluation of achievement rate of objectives and goals planned by the program at a given point in time. This necessitates the proper definition of objectives, as well as of the epidemiological and operational indicators set for their measurement.

2. Addressing TB close contacts, the needs of vulnerable and poor people, MDR-TB and TB-HIV

Such addressing should include:

2.1 Systemic control of close contacts of TB patients and high risk populations

2.2 Controlling MDR, preventing TB infection and other airborne infections

2.3 Increasing cooperation between TB and HIV programs and implementation of joint TB-HIV activities

Population representing high risk for developing TB include close contacts of TB patients; Roma and Egyptian people; prisoners; the homeless; people living in residential care institutions (nursing homes, psychiatric hospitals); those who come from areas characterized by high TB prevalence to the suburbs of Tirana and Durrës; alcoholics and drug users; mine workers; immigrants; people coming from Kosovo; those who have recently returned from emigration and those affected by HIV/AIDS.

No legislation is available for addressing active and systematic control among vulnerable groups. These deficiencies have become more obvious in the recent years and they relate mainly to the health reform and the establishment of a reference system that don't allow uninsured people, the majority of whom are included in vulnerable groups, to benefit from the active screening, therefore prompt legislative intervention is needed. This legislative intervention must be followed by the drafting of guidelines on the screening and treatment of these groups.

2.1 Control of close contacts of TB patients is not performed at the required extent

Close contact control includes clinical evaluation of the contact, PPD, bacteriological and radiological examination. Over the years funded by Round 5 of the GF, the close contact tracing rate has increased to reach up to 80% of close contact controlled cases, and the rate of cases diagnosed by close contact control has been relatively high, about 6%. However, upon completion of the project close contact control declined to 70% and this is mainly due to the lack of PPD.

Another factor that has impacted the decline in the rate of contact control was the health reform regarding the establishment of the reference system. The consolidation of the latter has resulted in failure to screen a considerable number of contacts since they are not covered by health insurance, and this requires prompt legal regulation.

Control of close contacts with TB patients must be a priority in the coming years, because the rate of diagnosis from contacts is high. This control implies a systematic process aimed at diagnosing or excluding active TB in close contacts.

Apart from the abovementioned examinations, contact evaluation must include IGRA testing for latent tuberculosis infections (LTBI) in specific categories and particularly children who have received BCG vaccine in our country.
Apart from LTBI it is recommended that all household contacts of an index case infected with HIV are advised and tested for HIV.
Contact investigation must be done immediately after diagnosis (usually within one week) in order to find out the names of household and close contacts. Focus should be place on relatives who live in the same household, but also on people at the workplace and other premises that may lead to exposure. Evaluation must also include contacts in residential care institutions; those in long-term treatment institutions; detention facilities; prisons and acute medical care facilities, particularly where there is exposure to cough.
Contact tracing must be performed by the staff of dispensaries in cooperation with epidemiologists and the respective family doctors. This staff must receive training on the importance of contact investigation, manner of interview, data collection, timely follow up and reporting.

2.2 ADDRESING THE ROMA, PRISONERS AND OTHER GROUPS AT RISK

Lack of active contact tracing, and social support among Roma and Egyptian people
The number of Roma and Egyptian people, and moreover TB prevalence among these groups are not known precisely, because as already mentioned these groups pose pronounced difficulties both for diagnosis and treatment. People from these groups are poor, uninsured and often unregistered, and TB is diagnosed at advanced stages. Active screening and social support are indispensable for these people. Additionally, it is important to involve representatives of these people to assist in TB control activities in these groups, as the direct approach in this case is very difficult.

Lack of a reliable TB control system in penitentiary system
The number of TB cases in Albanian prisons is not high, however hygienic and sanitary conditions are poor. Inadequate conditions and overcrowding are particularly of concern in detention facilities. A study conducted in the prisons of the country indicates that TB infection prevalence is very high, more than 50% of prisoners are infected, which contrast highly compared to general population. Thus prisoners are an important contingent for the development of the disease not only in prisons, but constituting risk also to the general population after their release from prison. To this end, chemoprophylaxis and active screening among this segment of the population is vital.
TB control programs in prisons must be drafted and implemented in close cooperation between the NTP and the health care system of prisons, including the Ministry of Justice.

Lack of TB control in residential care institutions (nursing homes, psychiatric hospitals)

Although these institutions have medical staff, their knowledge on TB is not adequate, and the living and eating conditions of patients are poor, particularly in psychiatric hospitals. Due to the age, the disease and poor conditions people of these groups are malnourished and more likely to be affected by TB. To this end, this group must undergo active, periodic TB control.

Lack of systematic control among mine workers

The number of mine workers suffering from pneumoconiosis is small, but they constitute an important contingent for TB development. Often these patients are considered as chronically ill, they have respiratory failure or other co-morbidities, and they do not receive proper attention regarding TB diagnosis, moreover that TB in pneumoconiosis is manifested in vary atypical forms. TB diagnosis in this group is difficult and often requires high medical expertise. Special attention should be paid to these patients during their hospitalization because of exacerbations. Active and periodical controls should also be planned.

Former emigrants and emigrants

Special attention must be paid to this group because the number of TB cases among this category is increasing due to the economic crisis in Europe and mainly in Greece and Italy. Furthermore, they do not benefit from health insurance and face obstacles in accessing health care services in case they develop TB. Proper legislation on their access to health care services should be drafted.

The number of immigrants in Albania is also increasing, with them coming mainly from countries characterized by high TB prevalence, such as China, Turkey, and other Arab countries. They must undergo medical checks prior to their entry in the country as well as periodic controls according to the work they do.

HIV/AIDS patients

The number of those having TB and HIV co-infection is small, however it is a category that should not be neglected, as numbers are rising. The establishment of a joint working group for the two programs TB/HIV, cooperation with HIV/AIDS ambulatory clinics, screening of TB patients for HIV infections and screening of HIV patients for LTBI must be addressed in a strategy.

TB in children

Children are gaining increasing importance in the global expansion of the “Stop TB” strategy, published in 2006, revised in 2012 and revised again for 2015 and onward. TB in children under 15 years of age (so called paediatric TB) is a problem of particular importance for public health, because it is an indicator of recent transmission. Likewise,

of particular importance is the fact that newborns and infants are more likely to develop life threatening forms of TB (like disseminated TB, tuberculous meningitis) than older children and adults.
Confirmation of TB in children by means of laboratory tests is often challenging and children are not diagnosed.
TB prevalence in children has increased over the last two years. This should be considered a negative indicator for the TB epidemiological situation. Paediatric service is separate from the NTP, but it has some connection with the latter as it implements the same strategy, receives drugs supplies from the NTP and is part of the recording and reporting system at the NTP. Paediatricians have not been included in TB training over the last decades and consequently their knowledge on TB is insufficient. Training of paediatricians on TB should be considered a priority.
Special paediatric guidelines are lacking both regarding TB in children and also prophylaxis, therefore the preparation of these guidelines is urgent.

There are no measures for TB control among the population coming from Kosovo and in the borderline areas

Another risk group is the population coming from Kosovo, as in the recent years we have seen massive movement particularly during summer. Kosovo is considered a country with high TB prevalence and their employment mainly in public sectors such as hotels, restaurants and different shops might represent an added risk of infection for our population. The entry of Kosovars in Albania may be periodic for different reasons such as business, education, etc., and seasonal, mostly including movements during the tourist season (mainly in the form of family tourism). This increases the probability of contact with infectious TB patients, diagnosed or not, especially in the case of family tourism. Therefore, in order to prevent the effects this population may have on TB control in Albania it is necessary to increase cooperation between the two Programs both for information exchange and treatment of TB cases. Kosovars working in Albania must receive a health card which implies radiological examination for TB, among others.

There are patients from northern areas of the country, who have benefited from TB services in Kosovo with regards to diagnosis and treatment, but there is no proper information exchange, therefore information exchange between the two programs for TB patients is indispensable.

2.3 Controlling MDR, preventing TB infection and other airborne infections

Although MDR cases are not high in number, they have not been diagnosed in the last two years, thus becoming a potential risk for society and medical staff. Furthermore, treatment in our country is not possible, as second-line drugs and the necessary infrastructure for their treatment are missing. These patients are left at fate's mercy and most of them do not make it.
Guidelines for the treatment of MDR patients are lacking, and there is no qualified medical staff for the management of MDR patients. Adaptation of guidelines for the management of MDR patients and training of two doctors for the treatment of MDR patients should be done in the first two years of strategy implementation.

Infection control

Airborne infections account for about 70% of communicable diseases and they constitute a high death rate in the country. Albania has no written regulations on the control of airborne infections, moreover on MDR. Currently TB patients are treated in almost all hospitals in the country, and therefore not only hospitals but all health care centres need a TB control program drafted to ensure:

- Fast detection of TB infected patients
- Preliminary measures for airborne infection control
- Treatment of people who are suspected or confirmed with TB

TB infection control program shall be based on three hierarchy levels of control measures, including:

1. Administrative control
2. Environmental control
3. Use of respiratory protective equipment

Guidelines, laws and regulations for the control of airborne infections and MDR prevention must be drafted in cooperation with the respective institutions such as MoH, HiI, etc. TB cases have been frequent among health care employees and particularly those who work in lung disease hospitals. These cases are more frequent among cleaning staff. Special attention must be paid to infection control in bacteriological laboratories and particularly the NRLTB. The latter is facing alarming problems regarding the support power system for safety cabinets, and in case of electricity outages, which are frequent, all materials found in the cabinet are spread in the surrounding environment or directly in the respiratory tract of the laboratory workers. Likewise, maintenance and filter replacement are not done due to the lack of funds.
Sometimes even other simpler administrative measures are not implemented: Often TB patients are hospitalized in the same room with other patients. Currently we do not have a

budget dedicated to the maintenance of environmental protection equipment (such as safety cabinets, etc.).
The use of respiratory protective equipment can further reduce the risk related to the exposure of health care workers to infectious droplets spread in the air from patients with TB infection.

IMPLEMENTING JOINT TB-HIV ACTIVITIES

Joint TB/HIV activities were organized for the first time during the implementation of the 5th GF Round. These activities include the establishment of a joint coordination committee, screening of TB patients for HIV infection and screening of HIV patients for LTBI, and information exchange. These activities have almost ceased to exist due to the lack of funds.

The policy goal is to provide national programs and respective directions to the stakeholders for the implementation of joint TB/HIV activities. HIV program and TB control program, including also their partners should come together to ensure access to integrated services, possibly at the same time and place, for TB/HIV prevention, diagnosis, treatment and care.

The National Coordination Program for joint TB/HIV activities must have clear and agreed upon terms.

Drug users and HIV patients

Illegal drug users still constitute a high risk group regarding TB infection and disease, but in our country they are completely uncontrolled. Although their number in our country is small, successful identification and treatment of tuberculosis among this group remains an important component of a comprehensive TB strategy, but this group represents unique challenges for TB diagnosis and control. New diagnostic methods, including IGRA testing, provide the potential to improve diagnosis and supervision of TB patients among this group.

3. LACK OF CHEMOPROPHYLAXIS FOR THE LATENT TUBERCULOSIS INFECTION

Isoniazid chemoprophylaxis is considered as one of the most important recommendations of the WHO and ECDC for Albania in the current stage. Isoniazid chemoprophylaxis must be a priority in the new strategy, and the range of candidates for chemoprophylaxis must be expanded. Apart from detecting TB infection in close contacts it is important to screen other most at risk groups for the development of TB disease, especially the vulnerable groups. A study conducted in Albania on the TB infection prevalence among school students has found big regional differences in LTBI prevalence. There are areas in the south of the country with TB infection prevalence close to zero, whereas in the big cities and in the north there are areas with prevalence higher than 12% of infected students. Thus, it is necessary to have a strategy on chemoprophylaxis that will take into consideration these big regional differences as well.

Chemoprophylaxis indications in Albania are made in compliance with the national guidelines on TB control, but there are no special guidelines and they are not put into practise. During the last years chemoprophylaxis has not been performed due to the lack of PPD, but also due to difficulties related to its administration in practice. Thus, drafting guidelines on chemoprophylaxis is necessary.

BCG VACCINATION

BCG vaccination policy and its administration are carried out by the Ministry of Health and the Public Health Institute. The vaccination is performed in the maternity hospital during the first days after birth. There is room for reviewing the vaccination policies, postponing the age or vaccinating only the most at risk groups for TB development.

4. CONTRIBUTING TO THE HEALTH SYSTEM STRENGTHENING BASED ON THE PRIMARY HEALTH CARE SERVICE

Health care system in Albania still remains centralized. Despite the investments and some positive changes during the last years, the health care system has many serious problems to solve. Among the main problems that can be identified are: low access in the health care services, low efficiency of health care services and poor quality of the health care system. On the other hand the health care system is facing big challenges such as the increasing prevalence of chronic diseases related to the aging of the population, increasing of demands for more qualitative services and sophisticated medical technology. The health care reform having as a main goal the transition from a system covered from the health care insurances and based on the individual contribution to the universal coverage despite the financial contribution, is estimated to take 4 years. This is a timeframe that poses difficulties for the solution of legal problems that TB patients have and especially the vulnerable groups regarding the access for diagnosis in the medical structures.

4.1 Implementation of PAL (Practical Approach to Lung Health) strategy

The WHO recommends PAL strategy in the STOP TB strategy as an activity that considerably contributes in the control of TB and in strengthening the health care system. Albania is characterized from a high prevalence of respiratory diseases and their misdiagnosis and mismanagement is concerning. There is a lot of abuse noticed regarding the administration of antibiotics. Those are administered without any criteria and mostly without having any indications for their administration. This had led to a high bacterial resistance, which is observed during the treatment of pneumonias in hospitals. Apart from the bacterial resistance, the misadministration of antibiotics is an added economic burden for the people and state, and it increases side effects from the antibiotics.

PAL implementation:

- will standardize the management of patients with respiratory symptoms at the primary health care level
- will standardize the referral system for patients with respiratory symptoms from the primary health care level to the different specialties: pulmonology, internal medicine, paediatrics, ORL, etc.
- will strengthen the collaboration of the family doctors with the pulmonologists
- will lead to the early detection of TB cases
- will lead to the reduction of the total cost for the patients with respiratory symptoms that constitute more than half of the medical consults at the primary health care level
- will increase the interest and commitment for patients with respiratory problems, including TB

The implementation of this strategy becomes even more necessary under the conditions of our country, where the inclusion of the family doctor has been foreseen for TB control as an important component of TB control.
It is important to ensure the commitment of the stakeholders for this activity and the legal framework that includes PAL in the health care insurance norms, etc.

4.2 Human resources development

Human resources development has been considered as a part of the political commitment of the government and it has been explained above. An important element of the human resources development is also the education of the medical staff, population and patients on TB disease. A person should be engaged "part time" at the NTP on this purpose, responsible for planning, coordinating and monitoring the training and educational activities.

Also, the education programs in the faculty of medicine or nursery school should contain sufficient knowledge for TB and the national policies for its control.

The health care reform in many countries, and in our country as well, represents opportunities but also threats related to the TB control activities and the medical staff performance. With the increase of experience during the implementation of the training programs on TB control, the awareness on strengthening the training quality, on the need for their continuity and the need for a better management of these training programs has increased as well. The strategy on training should describe the planning and implementation of trainings as a part of the intervention in the health care system. The training quality is of special importance for the successful implementation of the strategy on the fight against TB.

All employees in the health care system must be trained to have the sufficient knowledge for TB and the health care information system.

The staff must be motivated and qualified. All strategies related to human capacity-building such as work meetings, workshops, conferences and training programs and trainings at workplace are necessary and will be applied.

Participation in the international TB congress and annual meetings of Wolfheze are necessary for the TB staff.

Exchange of experience and information with the neighbour countries such as Kosovo, Greece, Italy and Macedonia is of interest for TB control in the country.

4.3. Information system management

The NTP has a very good system of recording and reporting that constitutes a good basis for data analysis as well. The system must be included in the information system of the Public Health Institute and the Ministry of Health.

The NTP needs the necessary infrastructure such as laptop, desktop, printer and also software for data recording and processing, and treatment control as well.

5. Empower people with TB, the community and all medical suppliers by establishing partnerships

Traditionally, TB control has been considered as a duty of the state and the contribution of other bodies and NGOs has been absent. The contribution of other bodies has started after the fall of communism and has been very important during the years of transition. An important role in this has played WHO, USAID, MERLIN and the Global Fund. With the economic growth of the country their role has vanished, apart from the WHO and GF.

Follow a public approach, without excluding private health care services.

5.1 ENGAGING PEOPLE WITH TB AND THE COMMUNITY THROUGH PARTNERSHIP

Health education for TB patients and the general population

Even though the health education of the general population is not a priority for the NTP, it will mainly be focused on limited activities. The aim of this objective is to sensitize and raise awareness through these activities among the population, TB patients, their family members and the health care staff to build positive attitudes for the on time TB prevention and treatment. Thus, increasing knowledge on the early signs and symptoms of TB is more than necessary and this can be achieved through the on-going and genuine activity of health education in health care and non-health care institutions and in the community as well.

The activities that will support this objective are drafting and distributing materials for information, education and communication.

The training of health care employees (family doctors, nurses, laboratory technicians) is foreseen for all the objectives of the project. Also, the KAP survey and the missions of international technical assistance are foreseen in this element of the strategy.

Health education will mainly be focused on TB patients and their family members and on activities for the World TB Day and in the curriculum of the subject of biology of elementary schools.

6. Enabling and conducting local operational researches on TB

The operational researches are necessary to define the priorities for intervention by identifying the advantages and weaknesses of the program by means of analysing the data collected as part of the M&E plan (routine data and the results of "ad hoc" studies as well), in order to identify the successful experiences and to successfully implement them throughout the country. The research to be done is as follows:

- operational research on TB prevalence in Albania
- operational research on the annual risk of TB infection
- operational research on gender related differences in TB
- operational research on TB strains genotyping
- operational research on innate immunity of the Albanians against TB

Operational plan

The operational plan describes the main activities of NSP in 5 years.

1. Ensuring political and financial commitment of the Government

Activity 1.1.1

Proper reorganization and operation of the National Committee on TB Control in the country. Year 1. Trimester 1.

Activity 1.1.2

Improvement of the existing legislation as regards the fight against TB and approval of guidelines drafting on TB control. Legislation of Year 1, is protocolled in year 1-3.

Activity 1.1.3

Procurement of the adequate capacities for the normal operation of NTP.

- Reorganisation of NTP. The NTP must exist as a separate unit, subordinate to the Ministry of Health, with staff and duties approved by MoH.
- Full time employment at the NTP of 2 doctors of public health care, during Year 1. They shall have defined duties and shall cover problems related to logistics, drugs management, treatment, health education, activities coordination with other programs such as HIV, etc.

Activity 1.1.4

Allocation of a specific budged dedicated to the main TB related activities

- Procurement by the Government of a budget dedicated specifically to the coverage of basic TB control activities. This budget should cover the purchase of anti-TB drugs, reagents and consumables for the laboratories, activities related to surveillance and monitoring, chemoprophylaxis, infection control and support to vulnerable groups.

The Government should gradually increase the budget, from year to year, so that by the end of the third year it can take over all the expenditure related to the main activities of the strategic plan.

Establishment of a reliable system for the procurement and management of drugs

Activity 1.1.5

The first line anti-TB drugs should be registered within the first year.

Activity 1.1.6

Within the first year, a person should be appointed at NTP for the management of drugs and such person should be trained as regards the terms of reference mentioned above.

Activity 1.1.7

Organization of trainings for the dispensaries staff, related to the storage and management of anti-TB drugs, should be made within the first and the fourth year.

Improvement of legal framework on TB control

Activity 1.1.8

Inclusion of primary care in TB control as well as the cooperation of NTP and dispensaries with the primary care should be governed by the law.

Activity 1.1.9

Improvement of the legal framework on TB control in order to comply with the changes derived from the healthcare reform. This improvement must be primarily focused on the following rules: mandatory reporting of TB cases by doctors and laboratories; mandatory supervised treatment for pulmonary TB cases; mandatory close contact tracing; free of charge service and treatment for all patient categories; coverage of expenses by the health insurance; granting invalidity as of the start of treatment for TB patients and not after six months, regardless of the age; restriction of Rifampicin in the ambulatory pharmaceutical market, and the issue of patients that interrupt or refuse the treatment.

Activity 1.1.10

Organisation of meetings in central level, for being acquainted with any amendments to the legislation. National Committee on TB Control. Year 1

Drafting a strategic plan for human resource development

Activity 1.1.11

Establishment of a working group with experts from all the stakeholders, for drafting a strategy on human resources development within the first year.

Activity 1.1.12

Organising a meeting regarding the elaboration of a strategic plan for the human resources development and distribution, within the first year. Representatives from

the Government, Ministry of Health, Ministry of Education, Ministry of Justice, etc. - Year 1

Activity 1.1.13

Organising a meeting with representatives from the HII and IPH regarding the discussion of the new terms of reference and the duties of the family doctors and epidemiologists related to the TB control: the responsible doctors for the follow up treatment, will help in the control of close contact and chemoprophylaxis – Year 1.

1.2 ENSURING MEDICAL ACCESS FOR ALL AND NATIONWIDE FOR A FAST AND ACCURATE BACTERIOLOGICAL AND RADIOLOGICAL DIAGNOSIS

Activity 1.2.1

Any cases suspicious for TB should undergo the smear direct and culture examination. Establishment of units in each district regardless of having or not a dispensary, for the smear collection. Each unit must be equipped with plastic glasses (containers), plastic boxes and boxes of ice.

Activity 1.2.2

Organising of transport system for smear samples transport from the districts to NRLTB. The fund of GF.

Activity 1.2.3

Procurement and purchase of a Gin expert for the fast diagnosis of MDR.

Activity 1.2.4

Ensuring of molecular typing continuity through procurement of necessary materials.

Activity 1.2.5

Purchasing of nebulizers and solutions for the diagnosis through smear provoked by hipersaline aerosol in cases suspicious for TB and resulting smear-negative. The fund for the materials and treatment shall be provided by GF.

Activity 1.2.6

Closure of laboratories that do not provide the required number of examinations. 7 laboratories from 17 existing ones shall remain open. Year 1.

Activity 1.2.7

Ensuring of a special and centralized budget item for the NRLTB and peripheral laboratories – Year 1, 2, 3, 4, 5

Activity 1.2.8

Staff of dispensaries and several healthcare centres must be trained on the method of collection and transport of smear samples - Year 1, retraining in year 3.

Training of laboratories staff regarding the improvement of bacteriological diagnosis is provided under the human resources development.

Diagnosis improvement through radiological examination and other supplemental examinations (CT, FBS)

Activity 1.2.9 Any cases suspicious for TB should undergo the radiologic examination, and if the diagnosis is unclear should additionally undergo the examinations with computerized tomography and FBS. Planning and purchasing of radiological films according to the needs – Year 1, 2, 3, 4, 5 Government Fund.

Activity 1.2.10 Organizing a meeting with representatives of the HII regarding the free of charge performance of CT and FBS for TB suspected and uninsured patients – Year 1 Government Fund.

Activity 1.2.11 Purchase of a Fibrobronchoscopy for TB patients, year 2. GF Fund.

Activity 1.2.12 Regional meetings with the participation of public health staff and health care staff involved in TB control. Annually at prefecture level. 2 meetings per year.

Activity 1.2.13

Establishment of a system for the proper and timely management of TB outbreaks. 2 round tables shall be convened during Year 1 of the grant.

Training of healthcare staff and active screening of specific groups (psychiatric hospitals, close contacts) is described under the respective objectives.

1.3 STANDARDIZED AND SUPERVISED TREATMENT DURING THE INTENSIVE PHASE AND SOCIAL SUPPORT TO THE PATIENT

Activity 1.3.1

During treatment intensive stage, the patient shall be hospitalized. Hospitalization is mandatory for all forms of smear-positive pulmonary TB cases, until their conversion to smear-negative. Hospitalization may be carried out at all district and regional hospitals that observe the measures related to infection control and perform supervised treatment. Government Fund.

Activity 1.3.2

Smear or culture negative pulmonary tuberculosis patients being in good social-economic conditions may be treated under ambulatory care. In both cases, the healthcare staff shall give the drugs to the patient every day, and the patient should take them in their presence.

Activity 1.3.3

During the treatment follow up stage, the patients shall take the medication from the nearest healthcare unit. During the treatment follow up stage, the patient shall be under the control of the family doctor or patronage nurse in cooperation with the dispensary staff, or the cooperation with Albanian Red Cross should be considered. The dispensaries staff in cities and villages and the staff of the nearest healthcare centre shall follow the treatment at the follow up stage.

Activity 1.3.4

Patients failing to appear for the treatment or leaving the treatment shall be contacted immediately and undergo the treatment. If such a thing is not achieved, the dispensary and district epidemiologist should be notified accordingly.

Activity 1.3.5

TB cases shall undergo personalized treatment. Cases that do not have social support and are at risk of not receiving treatment on daily basis shall be managed according to a special program. TB patients shall be provided with social and economic support during the treatment stage, in the form of basic food packages and transport incentives. Invalidity for one year, from the Government Fund, food packages and transport incentives from the GF.

Activity 1.3.6

The correct implementation of DOT in district hospitals requires training of the staff engaged in the treatment in hospitals, year 1, 3.

Activity 1.3.7

In addition to the monitoring of drugs administration, the outcome of the treatment should be confirmed by smear examination at the end of the first, second month and at the end of treatment. Cases remaining positive by the end of the second month should be referred to Tirana University Hospital.

- Meeting with the pulmonologist regarding the treatment outcome - annually

1.4 ESTABLISHMENT OF A RELIABLE SYSTEM FOR THE SUPPLY AND DISTRIBUTION OF ANTI-TB DRUGS

Activity 1.4.1

The staff at NTP shall be in charge of the drugs management. Person appointed during year 1.

Activity 1.4.2

Drugs procurement shall be centralized. Drugs shall be purchased in combined doses.

Activity 1.4.3

The supply of districts shall be made by NTP on quarterly basis, based on the demand and number of patients in districts as well as treatment registers.

Activity 1.4.4

Establishment of a regular control system on the usage and management of anti-TB drugs. Any 6 month monitoring of the dispensary by the centre.

Activity 1.4.5

Drafting and printing of registers on drugs management, in the centre and dispensary.

1.5 ESTABLISHMENT OF AN EFFECTIVE SYSTEM OF SUPERVISION, FOLLOW UP AND ASSESSMENT

Activity 1.5.1

Regular inspection of patient's treatment documentation. Twice per annum.

Activity 1.5.2

Supervision of their daily activity related to TB; regional epidemiologist. Once a month.

Activity 1.5.3

Inspection of consumables, their administration method and present shortages; drugs and their expiry date inspection. Twice a year.

Activity 1.5.4

Discussions with TB patients, simultaneously monitoring their knowledge about TB and treatment.

Activity 1.5.5

Detection of TB cases which have not undergone the smear examination; detection of smear-positive TB cases; the number of smear negative TB; investigation of the NRLTB liaison with the local one; monitoring of the negativism rhythm and treatment outcomes.

Activity 1.5. 6 Provision of the required documentation for the performance of M&E activities and recording of the daily work activities (notification sheet, laboratory registers, dispensaries registers etc.).

Activity 1.5.7 Computerization of the M&E system and designing the software for this purpose.

2. Addressing TB close contacts, the needs of vulnerable and poor people, MDR-TB and TB-HIV

Such activities aim to achieve the regular control of close contacts of TB patients and high risk populations.

Activity 2.1.1 Clinical evaluation of all close contacts of TB patients and execution of complementary examinations: cutaneous tuberculin test and IGRA test for latent tuberculosis infection (LTBI); bacteriological and radiological examination (within a week).

Activity 2.1.2 Collection under a standardized format of the data derived from contact investigation.

Activity 2.1.3 Improvement of the legislation and drafting of guidelines related to the close contacts of TB patients control. Close contacts control shall be free of charge. Year 2.

Activity 2.1.4 Active screening and social support to TB patients of Roma and Egyptian population. Active screening at this group shall be performed not only to close contacts of TB patients but to the entire community being in close contact with these patients.

Activity 2.1.5 Granting of incentives for the diagnosis and treatment of cases suspicious for TB in Roma population (food packages and economic aid).

Activity 2.1.6 Training of representatives from Roma and Egyptian community, regarding TB. These persons with influence in the community shall assist the management of the cases and close contacts. Such individuals shall benefit incentives as per the activities they shall perform. Annual training, once a year. GF.

Activity 2.1.7 Training of prisons staff regarding the TB diagnosis and management as well as the chemoprophylaxis.

Activity 2.1.8 Diagnosis of latent TB infection in prisons and provision of chemoprophylaxis. Year 1 and 3, one sample out of 1000 prisoners.

Activity 2.1.9 Each prisoner shall undergo the clinical examination for TB and PPD application, before entering prison. Suspicious cases shall additionally undergo the radiological and bacteriological examination (three smears).

Activity 2.1.10 Any patient hospitalized for the first time or any person admitted to the nursing home must undergo screening for TB (RTG chest, BK smear and clinical screening).

Activity 2.1.11 Periodic inspection at residential care institutions (psychiatric hospitals). Clinical, radiologic screening and BK smear for any case being admitted and once a year. Each year.

Activity 2.1.12 Patients suffering from pneumoconiosis shall be controlled at least once a year through clinical screening, BK direct smear and culture and radiological screening.

Activity 2.1.13 Regular control of emigrants and former emigrants during the first year of their return or entry in Albania regardless of whether or not being insured. This shall be governed by law. Radiological screening and BK smear. Each year.

Activity 2.1.14 Strengthening of TB control in children shall be achieved through the involvement of paediatricians in NTP and their training. Also important is drafting of the required guidelines. Such activities shall be performed during the first year.

Activity 2.1.15 Strengthening TB control measures for the people coming from Kosovo and boarder areas. Kosovars working as seasonal workers should be provided with health care card. The relevant programs should be immediately notified for cases diagnosed with TB disease in Albania or otherwise for TB cases diagnosed in Kosovo.

Activity 2.1.16 Organization of round tables once a year, with representatives from NTP in Kosovo and Macedonia. One meeting in Albania and one meeting in Kosovo and Macedonia. Annually.

2.2 MDR control, TB infection and other airborne infections prevention

Activity 2.2.1 Establishing two negative pressure rooms for MDR patients. Year 1.
Activity 2.2.2 Second line drugs procurement through GLS. Year 1 and annually thereafter.
Activity 2.2.3 Training of two practitioners for the management of MDR cases and drugs side effects. Year 1. 2 weeks training in Estonia.
Activity 2.2.4 Drafting of guidelines for MDR patients treatment. Year 1.
Activity 2.2.5 Drafting of guidelines for TB infections control and other airborne infection in health care institutions. Year 2.
Activity 2.2.6 Purchase of special masks for the staff most exposed to TB, medical staff in laboratories, FBS screening room, cleaning staff.
Activity 2.2.7 Purchase of cleaning accessories for the premises where TB patients are treated.
Activity 2.2.8 Drafting and printing of leaflets on airborne infection prevention in health care institutions. Year 2.
Activity 2.2.9 Drafting of regulations for purposes of assigning responsibilities for TB infection control in hospitals.
Activity 2.2.10 Ensuring different posters and booklets for infection control.
Activity 2.2.11 Purchasing of second line drugs for 3 patients a year.

2.3 IMPLEMENTING JOINT TB-HIV ACTIVITIES

Activity 2.3.1 Establishing a joint TB/HIV committee for the coordination of activities among them. Meetings held twice a year.

Activity 2.3.2 Regular screening of Tb patients for HIV infection upon commencing treatment with anti-TB drugs.

Activity 2.3.3 Regular screening of HIV patients for tuberculosis and latent tuberculosis infection. Annually for each patient. A part of patients must undergo screening for TB infection through IGRA test.

Activity 2.3.4 Periodic control of drug users once a year for TB and latent tuberculosis infection. Once a year for each patient.
Activity 2.3.5 Meeting with respective NGOs that manage the drug users once a year.
Activity 2.3.6 Visits in the index patient's house, by the contact's investigators.
Activity 2.3.7 Purchasing of PPD and IGRA**.**
Activity 2.3.8: HIV counselling and testing of an index patient that has HIV infection.
Activity 2.3.9: Purchasing of HIV tests for TB patients hospitalized at Tirana University Hospital. For the patients in districts, these tests shall be purchased by HIV Program.
Activity 2.3.10 Treatment with chemoprophylaxis of HIV infected individuals that are in the same house or in close contact with TB patients.
Activity 2.3.11 Periodic control of persons infected with HIV/AIDS. Any HIV infected patient shall be controlled periodically, once a year, for the TB or latent TB infection. PPD, radiological screening and BK smear.

3. Ensuring large scale TB infection control in Albania

Activity 3.1.1 Drafting of a special guideline for the performance in practice of chemoprophylaxis. GF, year 2.
Activity 3.1.2 Active screening for LTBI detection at vulnerable groups.
Activity 3.1.2 Purchasing PPP and IGRA.
Activity 3.1.4 Purchasing of Isoniazid in prophylaxis doses for children and adults.
Activity 3.1.5 Meeting held for purposes of reviewing the vaccination policies. Year 1.

4. CONTRIBUTING TO THE HEALTH CARE SERVICE STRENGTHENING

4.1 achieve quality implementation of PAL
4.2 contribute to health policies, human resources, provision of health care services and the computerized system

4.1 Implementation of PAL (Practical Approach to Lung Health) strategy

Activity 4.1.1 Establishing a steering committee at the national level to ensure a political commitment and support for the technical working group for PAL implementation.

Activity 4.1.2 Participation of 2 persons in the international workshops on PAL, organized by the WHO. 2 persons will be sponsored to participate, generally for 5 days.

Activity 4.1.3 Study on respiratory infections and usage of antibiotics in ambulatory care.

Activity 4.1.4 establishment of working groups with pulmonologists, family doctors, public healthcare employees and pharmacists for the drafting of training records on respiratory infections.

Activity 4.1.5 Introducing PAL strategy. Developing the Albanian PAL strategy based on the strategy recommended by the WHO and in the framework of PAL strategy implementation.

Activity 4.1.6 Approving the minutes on the management of respiratory infections, asthma and COPD by the MoH. Year 1.
Activity 4.1.7 Launching/publishing and publishing of PAL protocols.

Activity 4.1.8 Training family doctors that will participate in the pilot project for PAL implementation in two districts. Training of trainers, 60 general practitioners (family doctors), regarding the use of PAL instructions. (the last trimester of 2015). The general practitioners will participate in the implementation of PAL instructions as a pilot project (so called feasibility proof). Pursuant to the results achieved, it will be decided how PAL implementation will be further extended at national level.

Activity 4.1.9 PAL implementation in two districts. Year 2016.

Activity 4.1.10 Studying the evaluation of the pilot implementation of PAL. Year end 2016.

Activity 4.1.11 Extending PAL strategy at the national level. Year 2017.

4.2 Human resources development

Human resources development has been considered as part of the political commitment of the government and it has been explained above for the part related to the direct political commitment.

The main activities related to the human resources development shall be:

Activity 4.2.1 Reviewing the curricula of all medical staff included in TB control (pulmonologists, general practitioners, family doctors, nurses, epidemiologists). GF Fund. Establishing a working group of 5 persons, year 1. GF.

Activity 4.2.2 Inclusion of sufficient knowledge on TB and national policies on its control in the curricula of the faculty of medicine and nursing school. Establishing a working group with academic representatives. Year 2.

Activity 4.2.3 Training of pulmonologists year 1 and 3.

Activity 4.2.4 Training of nursing staff engaged in TB control. Year 1 and 3.

Activity 4.2.5 Participation of NTP staff in the international TB congress and annual meetings of Wolfheze. Each year.

Activity 4.2.6 Exchange of experience and information with the neighbour countries such as Kosovo, Greece, Italy and Macedonia is of interest for TB control in the country. Each year.

Activity 4.2.7 A doctor shall be trained for the epidemiology and information system on TB.

Activity 4.2.8 **Subscription in "The International Journal of Respiratory Diseases of the IUATLD" magazine and "European Respiratory Journal".**

Activity 4.2.9 Health education towards TB stigma and signs (drafting, printing and distribution of leaflets and other educational materials on TB). GF Fund.

4.3 Information system management

TB related information is included in the national information system and the data shall be made available to the stakeholders such as IPH, MoH and Primary Care. Year 2.

Activity 4.3.1 Procurement and purchase of the required infrastructure such as laptop, desktop, printer, video projector. Year 1. GF.

Activity 4.3.2 Designing of a software for data registration and processing, as well as treatment control.

Activity 4.3.3 ***Drafting of quarterly statistic reports and analysing collected data. Drafting of the annual report by the year end.***

5. Contributing to health system strengthening based on primary health care

5.1 Health education for TB patients and the general population

Even though the health education of the general population is not a priority for the NTP, it will mainly be focused on the World Tuberculosis Day and biology curriculum of elementary schools. Health education shall be mainly focused on the TB patients and their family members.

Activity 5.1.1 Activities on World Tuberculosis Day for increasing the society, Government and community awareness of TB.

Activity 5.1.2 Reviewing of biology curricula, as regards TB, in cooperation with the Ministry of Education.

Activity 5.1.3 Processing, multiplying and distributing the health educational materials: booklets for TB patients (5000 pieces), leaflets (25,000 pieces) in Year 2. Additionally, a video material on TB patients shall be processed.

Activity 5.1.4 Preparing a video material with TB patients.

5.2 Cooperation with other partners

Activity 5.2. 1 Cooperating with Albanian Red Cross. Joint community, 2 meetings a year.
Activity 5.2. 2 Cooperation with private doctors. Their training. Year 1 and 3.

6. Enabling and conducting local operational researches on TB

The operational researches are necessary to define the priorities for intervention by identifying the advantages and weaknesses of the program by means of analysing the data gathered as part of the M&E plan (routine data and the results of "ad hoc" studies as well), in order to identify the successful experiences and to successfully implement them throughout the country.

Activity 6.1.1 Research on TB prevalence in Albania. Year 2.

Activity 6.1.1 Research on the annual risk of TB infection. Year 1.

Activity 6.1.1 Research on gender differences in TB. Year 1.

Activity 6.1.1 Research on genotyping of TB strains. Year 3.

Activity 6.1.1 Natural immunity of the Albanians against TB. Year 3.