



Swiss Tropical Institute
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SENTENCED TO DIE?

Tuberculosis control in prisons

with a focus on the Republics of the former Soviet Union

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EXECUTIVE SUMMARY

As a result of the economic decline, social disruption and the legal procedures still in place, Russia and the Former Soviet States have some of the world's highest per capita prison populations. The increasing poverty and the lack of efficient public health control fuels the tuberculosis (TB) epidemic in the region. Rates of active tuberculosis amongst prisoners are known to be up to 50 times higher than the rates of the civilian population. TB is a major cause of sickness and death in prisons. At the same time, prisons serve as a pump for spreading TB into the general population through released inmates, guards and visitors. As extremely high rates of multi-drug resistance were found amongst prisoners suffering from TB in the region, the control of TB in prisons becomes a public health emergency in Eastern Europe and Central Asia.

However, some specific issues render the control of TB in this sub group difficult. Overcrowding and under-funding is a chronic problem in most of these prisons, promoting a rapid spread of the infection. Health care within the establishments is often not provided under the Ministry of Health but rather the Ministry in charge of prisons. Coordination and cooperation between the civilian and the prison health system are often weak, leaving many prisoners ill and infectious at the time they are released. TB-drug trafficking, parallel power structures, disruption in regular supplies of drugs or the lack of financial access to care result in irregular and incomplete treatment, explaining the extremely high rates of multi-drug resistance.

At the same time, experiences of effective TB control programmes in prisons in such settings exist and are documented. The World Health Organisation has published guidelines for TB control in prisons of which the most important strategic components are described in the following paper. Improved physical conditions, motivation and training of staff, cost-effective screening procedures, a clear drug policy and continuity of care, and decentralised TB prison services with strong links to the civilian TB programmes are some of the elements necessary for a successful TB control programme amongst prisoners. TB control in prisons has to be addressed at the same time as improving TB control programmes for the general population. Access to the very costly treatment for multi-drug resistant TB is in this context of constrained resources a particularly burning issue.

Financial and technical assistance by the international community in this field are greatly needed, but demand highly professional approaches in order not to do more harm than good. Examples of agencies and organisations having experience with TB control in this setting are listed in the last part of the document.

INTRODUCTION

On a given day, there are an estimated 8 to 10 million people incarcerated worldwide, and their numbers are increasing. Since many are detained for short periods the rates of admissions and releases are almost equivalent. The actual numbers passing through prisons each year is therefore potentially four to six times higher. Prisoners are mostly male (90 to 95% worldwide) and young.

The economic decline and the social disruption following the breakdown of the Soviet Union resulted in the collapse of the public health system and in massive cuts of funding for the public health infrastructure, including those components responsible for TB treatment and control. Tuberculosis (TB) and poverty are closely linked phenomena and TB has spread rapidly in Russia and the former Soviet States over the past decade. In Russia, for example, TB incidence (the number of new cases over a time period in a given population) is climbing by 10% every year.

At the same time, Russia has the world's highest per capita prison population. 690 prisoners /100'000 population in Russia (closely followed by the United States with roughly 630 prisoners per 100'000 inhabitants) compare to much less than 100 prisoners/100'000 population in most Central European States. Russia has today more than 1'000'000 detainees, of which approximately one in ten has active TB.

In many developing and transition countries, rates of active tuberculosis amongst prisoners are known to be up to 50 times higher than the rates of the civilian population. A survey in Georgia in 1997-8, for example, showed that prisoners had a rate of 5995 smear/culture positive TB cases per 100'000 inmates, whereas the rate of all forms of TB in the civilian population was 155/100'000. (*WHO: Tuberculosis Control in Prisons, A manual for programme managers, 2000*). According to Médecins Sans Frontières, who operate a large TB control programme among prisoners in Siberia, Russian prisoners contract TB 40 times more often than civilians. "Doctors in civilian TB dispensaries throughout Central Siberia estimate that up to 70% of their patients are former prisoners" (*MSF medical coordinator in Kemerovo Region, Siberia*)

Health problems in prisons, such as tuberculosis, are the result of a complex interaction between poverty, imprisonment and disease. Ill-health thrives in settings of poverty, limited choices, conflict, discrimination and disinterest. It is thus not surprising that in prisons, major causes of sickness and death are HIV, malnutrition, mental illness, violence, and TB. Since TB is transmitted by airborne spread of infectious droplets, tuberculosis thrives in prisons, where inmates share rooms with many others and overcrowding is a prominent problem. As one prison official puts it: "The three major problems facing our correctional system are underfunding, overcrowding and tuberculosis. Simply being in prison is one of Russia's biggest risk factors for TB".(*In: Farmer; Cruel and unusual*)

TB is a major cause of sickness and death in prisons. Reports speak of tuberculosis death rates of up to 24%, with the disease causing up to 80% of all prison deaths. Directly or indirectly, these threats apply not only to prisoners, but also to all who come into contact with prisons and ultimately the community as a whole. Prison gates may be closed for prisoners, however, they cannot stop infectious droplets to penetrate into the outside world. Prisons act as a reservoir for TB, pumping the disease into the civilian community through health personnel, staff, visitors, and inadequately treated released inmates. With so many TB

deaths in prison and with such a high rate of imprisonment, it is not surprising to learn that tuberculosis has become the single leading contributor to increased mortality among young Russian men. Thus, TB control in prisons is a public health urgency. Governments have an obligation to provide minimum levels of health care, accommodation and food for every prisoner. Health service providers should recognise the disproportionate health needs of prisoners, and services should be provided on the basis of equity or at least equivalence. The UN basic principles for the treatment of prisoners require that “prisoners shall have access to the health services available in the country without discrimination on the grounds of their legal situation”.

This article describes the setting of TB control in prisons and outlines how a TB control programme in a prison should be implemented.

THE SETTING

Prison health is often forgotten or given a low priority. Prisoners are stigmatised, hidden and rendered voiceless. The public is often ambivalent about providing quality care to those accused or convicted of wrongs against society, particularly where national resources are scarce. Thus, prison health services generally have serious shortcomings. Under-funding and demoralisation are common.

In most countries, especially in low-income countries, prisons are full beyond capacity, with prisoners from impoverished unhealthy backgrounds living in an even healthier environment. Prisoners very often originate from the most vulnerable groups of society – the poor, the mentally ill, those dependent on alcohol or drugs. These groups have - already before entering a prison - an increased risk of diseases such as TB. In prison, the risk of being infected or falling sick with TB is amplified by poor living conditions including poor sanitary conditions, overcrowding, poor ventilation, poor nutritional status, physical and emotional stress, including an atmosphere of violence, humiliation and dis-empowerment. Prisons are also a locus of HIV infection, a significant risk factor for acquiring and developing TB and for dying of TB. Also, there are power structures parallel to the official administration. Often, an unofficial internal hierarchy exists within the prison population. The power structures in the prisons of the republics of the former Soviet Union, for example, resemble a caste system. All these factors promote unhealthy behaviours and create obstacles in accessing and delivering health care.

In most cases health care in prisons is under the responsibility of the ministry in charge of prisons and not of the Ministry of health. This results in different authorities being responsible for the health of an individual arrested, detained and eventually released, with little co-ordination between them. Pre-trial detention centres are often of worse quality than the prisons proper and may pose special problems for the control of TB with its long treatment. Individuals detained in such centres can be among the most mobile within the prison system. Too often prisoners and former inmates fall through the gaps in the provision of health care. For instance, in Russia approximately 13,000 prisoners under treatment for TB are released every year. But only 7,000 to 8,000 of them seek treatment once in freedom.

Take, for example, the case of Viktor, a 32-year-old man arrested in Eastern Siberia in 1988. He is now only four months away from the end of an 11 year sentence for fraud. He was diagnosed with TB while working in the TB infirmary, a job he earned for good behaviour. He was treated but relapsed later in the course of his sentence. He is now slated to return to his wife and children in Siberia, but he's still sick. "Of course I'm worried I won't be better by the time my sentence is up and that I will give my illness to my family."

As one prison doctor puts it: "We can't really cure them - so we do our best to keep them alive. When they are released, many have not finished therapy. We send them out with prescriptions, rather than with medications."

(In: Farmer; Cruel and unusual)

In many cases, released prisoners cannot afford to pay for drugs and services, which, officially, are still given out free, but for which - in reality - unofficial user fees have been introduced. Stopping TB treatment before the completion of the full often results in the development of drug-resistant (often multidrug-resistant) tuberculosis. One speaks of multidrug-resistant TB (MDR-TB) when resistance to at least isoniazid (INH) and rifampicin (RIF), the two most powerful antituberculous drugs, is present. As discussed in the *annex 2*, MDR-TB demands very complex treatment protocols of prohibitive cost. In addition, a prisoner with MDR-TB can pass on his acquired resistance to another inmate or a member of his family or community who then harbours so-called primary multidrug-resistant TB. The presence of MDR-TB renders a patient practically untreatable with the regimens commonly available in this region.

As discussed before, the prevalence¹ of TB in prisons is often considerably higher than in the general population. However, the number of TB cases in prisons is often not included in the data of the ministries of health (for the reason discussed above: Ministries of Justice are usually in charge of prison health), even though in many countries the prisoners with TB form a considerable proportion of the overall number of TB cases in a country. It is estimated that in Russia there are approximately 75,000 new TB cases annually in the Russian civilian population (for a population of 150 million), while in Russian prisons there are approximately 40,000 new TB cases (for a population of 1 million). Approximately 10% of the one million detainees in Russia have active TB. Truly alarming is the fact that 20 to 25% of these 100,000 prisoners sick with TB are believed to suffer from MDR-TB. Prevalence surveys in Mariinsk (Siberia) and Tomsk (Siberia) showed MDR rates of 26% and 30% respectively among consecutive cases newly enrolled in the prison TB treatment programme. Similar surveys in the prisons of Baku (Azerbaijan) and Georgia showed MDR rates of 23% and 13%, respectively. (*Hans Kluge, TB coordinator. WHO TB Project Office, Moscow, Russia, 2000*). The short course treatment regimen commonly used in DOTS programmes is highly efficient in curing sensitive tuberculosis. When given to already resistant patients, the regimens commonly used in DOTS programmes may however amplify the resistance. The individual patient will not be cured and the epidemiological situation will worsen. It is thus not surprising but extremely worrying that with the re-treatment regimen commonly used under DOTS (an 8-month therapy with initially five drugs) a failure rate of 35% was found in a Siberian TB referral prison (in 1996/97).

¹ **Prevalence:** number of cases of an infection or a disease in a population at a given time (proportion)

Incidence: number of new cases over a time period in a given population

DIFFICULT ISSUES

The rules and laws of the mentioned unofficial hierarchy have direct implications for the control of TB: unfair selection of patients for treatment and trafficking of medicines can occur. Patients in the lower strata of the hierarchy may be pressurised by their bosses to hand over their TB drugs. Other patients may sell their drugs to the guards, give them to their relatives during family visits, use them as currency for gambling or for paying their debts. Poorly paid prison health staff may tolerate exchanges of sputum, taking bribes from wealthy prisoners.

Some prisoners may avoid diagnosis because they are afraid their release may be held up until they complete treatment. Other inmates may try to get on TB programmes even if they do not have the disease or may deliberately expose themselves to infection, because of the perceived - and in some cases quite real - benefits of better care in a hospital.

Education of patients is difficult in prisons. Prisoners have more immediate worries than the allusive dangers of not receiving a full course of treatment. Another complicating factor is the high prevalence of prisoners with alcohol/drug abuse and psychiatric diseases.

Inside the prison system, there is a lack of transfer of information about TB cases between prisons. Communication between prison health services and civil TB programmes is also lacking. This - together with the stigma of coming from prison - makes it difficult to ensure that released inmates can continue treatment when released. There also is a lack of information to prisoners about availability of TB services in the civil society (and sadly, adequate treatment is not always available and financially accessible). Amnesties, such as the release of nearly 350,000 Russian prisoners in March 2001, may pose a huge burden on the public health system due to the sheer number of people suddenly in need for TB treatment and make collaboration between the prison and the civilian TB programmes even more important.

Other constraints are absence of screening at point of first detention (police), a lack of quick and high-quality screening at prison entry and the inability to isolate newly detected cases. Separation of the infectious cases, at least for the first few weeks of treatment, should be made possible.

The high rates of drug resistance, including widespread MDR-TB, are a particular challenge. In view of the grave prison health and public health consequences, MDR-TB must be addressed urgently (*see also annex 2*).

AN EFFECTIVE TB CONTROL PROGRAMME IN PRISONS

TB control in prisons should form part of an integrated and comprehensive effort to improve health inside and outside prisons. A response to the 'TB crisis' in prisons needs to look at the problem as a whole. Interventions, such as universal access to the DOTS strategy, must be implemented urgently, but also be put in the broader perspective of the factors that promote and perpetuate disease in prison. Unless something is done about the underlying conditions, the high levels of infection will continue as one set of prisoners leaves prison and another group arrives to be infected in their turn. Interventions include reducing overcrowding

through penal reform, promoting the respect, protection and fulfilment of fundamental human rights, improving nutrition, and co-ordinating health systems to ensure continuity of care. In short, prison and penal reform is essential. In achieving these goals, partnerships with professionals from other disciplines must be built.

TB programmes in prisons should be implemented in accordance to the widely used TB control strategy called DOTS (*Directly Observed Treatment, Short-course*). This strategy has five key components:

1. Political commitment to sustained TB control activities.
2. Case detection by sputum smear microscopy among symptomatic patients self-reporting to health services ('passive case finding').
3. Standardised treatment regimen of six to eight months for at least all confirmed sputum smear positive cases, with directly observed therapy (DOT) for at least the initial two months of treatment.
4. Free and reliable (i.e. regular and uninterrupted) supply of high-quality anti-TB drugs.
5. A standardised recording and reporting system that allows the assessment of treatment results for each patient and for the TB control programme overall.

However, taking into account the specificity of the prison setting some adjustments are needed, as outlined below.

Political commitment

TB control in prisons demands firm political support, strong leadership, and adequate financial resources. International resources and expertise is needed in support to overcome the serious problem of TB in prisons.

Case finding

In terms of case detection, the usual case finding through self-referral should be complemented by active case finding (cases are actively sought by TB services) and screening on entry to prison. Giving of sputum should be directly observed so that trade with sputum samples does not occur.

All prisons should have easy access to peripheral basic laboratories that are supervised by more centralised higher level laboratories.

Case management

Many TB patients find adherence to treatment difficult. This is even more the case in prisons, where generally the environment is not supportive and problems such as alcohol/drug abuse and psychiatric diseases are more common. When health personnel also fulfil a custodial role then they have the difficult task to correctly balance medical and custodial priorities. Their custodial role may aggravate the situation, straining the relationship of trust needed between carer and patient.

In prison settings, pressures on patients to default from treatment include more immediate concerns than TB treatment, feelings of anxiety or hopelessness, coercion by other prisoners, the use of medication as an alternative currency, and the fear that release may be postponed while on TB treatment.

Thus, daily supervised drug administration is a must and has to be applied carefully and throughout treatment. Patients should form a queue in a well-ventilated area and enter the treatment room one at a time. This allows control of treatment and gives the patient an opportunity to raise any concerns with medical personnel. Drug intake must be observed until all tablets have been swallowed. After this, the patient should show his/her open mouth and hands and empty drug receptacle in order to reduce the risk of concealed tablet defaulting. However, treatment must not be coerced.

Auxiliary treatment to alleviate the symptoms of side effects and disease complications should be available. Psychiatric support and treatment as well as narcotic and alcoholic detoxification regimens should be considered.

Treatment regimens

The treatment regimens are the same as those used outside the prisons. However, where a substantial proportion of patients suffer from MDR-TB, implementing **DOTS-Plus**, a programme that includes expensive second-line drugs, should be considered. Compared to the common DOTS strategy, DOTS-Plus differs in four aspects: 1. the use of second-line drugs; 2. Much longer treatment periods; 3. access to laboratory facilities not only for smear microscopy, but also for culture and drug-susceptibility testing; and 4. frequent occurrence of partly substantial side effects (*see also annex 2 on MDR-TB*).

Recently, such DOTS-Plus programmes have been implemented in prisons and the effectiveness and feasibility of various treatment protocols is being studied. According to WHO, DOTS-Plus programmes should be considered pilot or operational research projects and should be subject to rigorous quality assurance, monitoring and evaluation through the implementation of strong data management systems.

Preconditions for DOTS-Plus programmes in prisons are: a well functioning and interrelated DOTS in and outside prisons, a centre of clinical excellence within the prison system to care for referred patients, sophisticated laboratory support and a secure supply of second line drugs.

Further information about DOTS-Plus programmes can be obtained from WHO under the links given in the reference list.

Education

Some authors (*Reyes, Coninx*) have mentioned that “education of patients is often hopeless in prisons, as they have more immediate worries than the dangers of not receiving a full course treatment”. However, even though all experts involved in TB control in prison settings share the view that this is a highly complex, complicated and often frustrating issue, many do not agree with this pessimistic statement. From Russia it is known, that many prisoners are extremely eager to be treated and even the above mentioned authors quote an example from Peru where compliance rates of up to 100% could be reached amongst imprisoned guerrillas. They also describe the key to success - convincing opinion leaders and using peer educators (in this case the internal guerrilla hierarchy).

This confirms the experience of many people who have managed TB programmes, not only those in prisons. Peer educators can play an essential role in educating patients, and often it is cured TB patients themselves or their relatives who can be more convincing and committed than health personnel. It is absolutely crucial that not only prisoners with TB, but also healthy prisoners, staff, visitors and policy makers are well informed about the disease and the necessity of early detection and complete treatment. Procedures need to be understood in order to enhance cooperation and fora for discussion created to help reduce

the negative impact of fear and misinformation, which contributes to the stigma of TB patients. As with any health education programme, a needs assessment should precede interventions in order to help target strategies and messages to the needs of the audience.

TB education should be part of an integrated package of health education and health promotion for prisoners. Issues such as HIV/AIDS prevention, prevention of drug abuse, alcoholism and violence need to be included. The link between the tuberculosis infection/disease and these other risk factors can then be dealt with.

Recording and reporting

A recording and reporting system is needed for the cohort analysis every three months and for assessing the overall impact of the programme. A proper *transfer form* is crucial for patients that are transferred to another correctional facility or released. This implies that working relationship with TB programmes of other prisons and of the civilian communities are established.

In summary, the following issues require careful attention when trying to improve TB services for prisoners:

- **Improved physical conditions in the prison setting:** this includes the provision of prisoners' basic needs, such as suitable accommodation, nutrition, ventilation, hygiene, general health care and promotion, and the respect of human rights.
- **Motivation and training of staff:** building on the capacity of staff is a prerequisite of setting up a successful TB programme and key to the motivation of the personnel involved. Specific training sessions should be set up according to the differing needs of various categories of staff (reaching from the ministry level and the prison administration, over the health personnel in prisons and custodial staff to key prisoners and maintenance and cleaning staff).
- **Patient health education:** *see above*
- **Cost-effective screening procedures and well organised laboratory network:** Active case finding and screening on entry should be a routine policy. All prisons should have level 1 laboratories and transport of specimen to level 2 and 3 laboratories of civilian TB control services should be organised, as well as a rapid delivery of results back to the prison.
- **Infection control procedures, with safety guidelines for prison staff:** overcrowding in prisons should be reduced and ventilation improved. Prisoners and staff have to be educated on how to effectively protect non-infected inmates from getting infected. Early detection and treatment of cases needs to be established. Security rules need to be elaborated, understood and applied by the staff.
- **Clear drug policy:** DOT (directly observed therapy) should be the norm throughout prison TB programmes, both in intensive and continuation treatment phases, in order to ensure that the patient actually swallows the treatment he needs. As explained above, classical short-course regimens (those commonly used in DOTS programmes) may not be appropriate for situations where multidrug-resistant TB is widespread. Drug policies have to be made case by case (by institution) and experts of the Green Light Committee (*see annex 2*) should be involved in making decisions about a possible DOTS-Plus programme.

- **Continuity of care during transfer within and outside prisons:** a rigorous system of notification for transfers into and out of prison and between prisons needs to be established. Close collaboration between the services involved and between the prison health system and the civilian control services has to ensure that patients continue their treatment once released or moved within the prison system.
- **Decentralised TB services within the prison system with strong links to the civilian TB programmes:** the previous system of “TB penal colonies” should be replaced by offering effective TB case management in the prisons without having to transfer the patient. Isolation facilities for the first weeks of treatment, when the patient is still infectious to others, need to be organised. The need for TB services in prisons to become an integral part of the civilian TB control system has been discussed above.

All experts agree that implementing and running an efficient TB programme in prisons is a challenging and complex task. An old rule in TB control says that you should **better do nothing than do TB control badly**. This refers to the problem described above, that badly or incompletely treated patients may not only become resistant and thus practically untreatable, but may spread multidrug-resistant TB to uninfected individuals and thus worsen the situation. Good planning and preparation is therefore essential when wanting to set up any TB control programme, and even more so when setting up TB services in prisons. *ANNEX 1* shows essential steps in planning a TB control programme in prisons as outlined in the 2000 WHO guideline.

TB control in prisons needs to be set up with the help of technical assistance of experts in the field. Professionalism and experience with the pitfalls and challenges of this specific context is crucial when setting up such programmes.

Within the issue of TB control in prisons, the specific aspect of managing MDR-TB is a significant public health problem and a huge human rights challenge. Often, public health specialists argue that MDR-TB is untreatable, as drugs are unavailable in resource constrained contexts and far too expensive. However, even if not considering the human suffering caused, when looking at economic arguments, one has to acknowledge that it will not be affordable to do nothing. This has been demonstrated during the MDR-TB outbreaks in prisons in the United States of America (according to CDC there were at least 11 prison outbreaks between 1985 and 1989). The authorities only mobilised appropriate resources after the situation got completely out of hands. “Finally, when all the costs of the 1998-94 MDR-TB epidemic were totalled it was clear that more than \$1 billion was spent to reign in the mutant mycobacteria. Saving perhaps \$200 million in budget cuts during the 1980s eventually cost America an enormous sum, not only in direct funds but also in lost productivity, and of course, human lives. (Garrett 1994, in Farmer; *Cruel and Unusual*)”. Farmer et al (in “*The Global Impact of Drug Resistant TB*”) estimated the costs of treating all TB patients of Russia with resistance to two drugs to be somewhere around US\$ 3 million (using expensive second line drugs), compared to US\$ 100 million when the same number of patients were to be treated for TB resistant to 5 drugs, which is likely to occur when partially resistant cases are treated with short-course treatment. Farmer calls the biggest pitfall in controlling TB in prisons “resignation”. He evokes the ethical question of double standards in treatment and states that “human rights arguments are most powerful if we really believe that all humans are equally valuable. When we do believe this, we are less likely to accept second-rate interventions, and more likely attend instead to remediate the inequalities that are each day brought more clearly into view by a globalizing economy.”

The discussion is in fact similar to the one about access of developing countries to antiretroviral therapy to treat HIV/AIDS infections. The problem is a comparable one: effective, but expensive treatments exist to save patients from a debilitating and mortal disease. This treatment is accessible to patients in industrialised nations, but not for those most in need in developing or transition countries. The difference is that tuberculosis **can** be cured and that the danger of leaving MDR-TB untreated is epidemiologically far greater than leaving HIV/AIDS without treatment. Of course public health and economic considerations have to be taken into account, but the problem will not improve without universal TB care. “Unless the prison epidemiological pump is brought under control, by the end of the next decade, it will generate hundreds of thousands of active cases of TB and millions of carriers. The parallel epidemic of HIV will lead to the explosion of active TB among the carrier population. The disease will spill out of Russia and spread globally” (*Goldfar and Kimerling “Report to the Gore-Primakov Commission”, 1999*)

Saying this, as for HIV/AIDS, prevention of TB infection and of aggravated disease status are of utmost priority and have to go hand in hand with the offer and access to good quality care. It is less expensive and more effective to invest in improving basic TB control programmes in order to prevent resistance to emerge in the first place than investing in the treatment of already resistant cases. And still a step closer to the root causes of the problem are investments in the prevention of TB infection in the first place. In addition to the efforts in the health sector, there is a need for governments to introduce measures to reduce the number of prisoners, especially juvenile prisoners, towards the European average through legal reform, speedier trials and the establishment of alternative sanctions. It should never be a consequence of judicial imprisonment that a person should be condemned to the distinct possibility of contracting disease. But as long as prison serves as amplifier and as long as effective treatment is not assured, tuberculosis is part of the punishment.

For example, Mischa Chukanov, then 22 years old, was arrested in 1997, for petty larceny- he and another young man were accused of stealing a crate of watches from a Moscow warehouse- and waited 17 months for his case to come to trial. But shortly prior to his first post-arrest encounter with a judge, Mischa was diagnosed with active pulmonary TB. After almost four months of treatment he remained “smear positive”, suggesting that he might never respond to conventional therapy. By his own account, he felt worse than ever and had lost almost 30 pounds since his arrest. Tried and convicted in absentia, he was slated for transfer to a TB prison colony. “It can’t be worse than here” he said. (*source: Farmer; Cruel and unusual*)

This means that finding a solution to the problem of tuberculosis among prisoners is often just as much a matter of good prison management as that of medical considerations. In addition, addressing the root cause of poverty with poverty reduction measures is an essential measure to address this problem, which can only be dealt with in a multidisciplinary way- again similar to what has been realised in fighting the HIV/AIDS epidemic.

After having discussed the problem and some approaches to deal with it, the last part of this document will address the international response to the issue of TB control in prisons in the GUS states and present some of the actors involved.

THE INTERNATIONAL RESPONSE TO THE PROBLEM OF TUBERCULOSIS IN PRISONS OF THE REPUBLICS OF THE FORMER SOVIET UNION

The resources needed to control TB including MDR-TB in these countries are huge and international support is needed. In 2000, a \$ 48 million World Bank loan was approved for the establishment of a TB treatment program in Russia's penitentiary system. International collaboration has not always been going smooth. It is important that Western experts show sensitivity and understanding towards the local setting, especially towards the 'complex' Russian setting. In June 2001, a World Bank loan, requested by the Russian government, that earmarked \$ 100 million for the nation-wide implementation of the DOTS strategy in Russia, was stalled by the Russian Ministry of Health. One reason for this was a clash over treatment methods. There are indications that the disagreement can be resolved in the months to come.

International agencies involved in TB control amongst prisoners in countries of the former Soviet Union are:

Médecins sans frontières (MSF) is currently treating in the Mariinsk prison 1255 of the 3900 prisoners suffering from TB in Kemerovo region, in **Siberia**. To date, MSF has treated more than 5000 TB patients, starting in June 1996. In addition, MSF runs anti-TB projects in Abkhazia (Georgia), Nagorno-Karabagh (Armenia), Kazakhstan (MSF Switzerland), Ossentia (Russia) and Uzbekistan.

In 2000 the **Armenian** government, in conjunction with the **International Committee of the Red Cross, ICRC**, launched a tuberculosis control programme within the country's penitentiary system. August saw the signing of a cooperation agreement between the Ministries of Health, Justice and the Interior and the ICRC. The ICRC agreed to help rebuild the prison system's central tuberculosis (TB) hospital in Yerevan, to build and equip a national reference laboratory for diagnosis in Abovyan, and to train local staff.

In **Azerbaijan**, the **ICRC's** treatment programme for TB patients in prisons was handed over to the Ministry of Justice. A total of 2,700 prisoners have been treated for TB by the ICRC since the inception of the project in 1995. In 2000, the Ministry of Justice introduced a comprehensive TB control plan with more treatment facilities and earlier diagnosis, in an effort to improve the unsatisfactory cure rate of 55%. For its part, the ICRC continued to monitor the prison programme and to provide TB drugs and laboratory supplies.

In **Russia** the **Public Health Research Institute, New York** runs the so-called **PHRI Regional Prison Project** in the Regions of Vladimir, Ivanovo, Mariy-El, Nizhniy Novogorod and Tomsk with some 8000 TB patients under treatment in 1999. The PHRI collaborates with Merlin (*see below*) and MSF (Médecins sans frontières) and funding for the project is coming from the **Soros Foundation, the European Union's ECHO Program and the British Know How Fund**. Some five years ago, a similar project was undertaken by Professor Paul Farmer of **Harvard Medical School**, sponsored by the **Bill and Melinda Gates foundation**. According to Farmer, the **World Bank** is preparing a \$150 million loan directed at fighting AIDS and TB in Russia, \$47 million of which is expected to finance TB treatment in prisons. TB financing has been provided in a numerous other projects financed

by the Bank, including: Azerbaijan, Kyrgyz Republic, Kazakhstan, Moldova, Romania, Uzbekistan. New projects under discussion in Eastern Europe and Central Asia include Albania, Belarus, Georgia, Russia, Ukraine.

Other actors are:

- **The Nord-Balt Prison Project in Latvia**, cooperating with **Sweden and Norway**
The Latvian judicial system must be improved to enable membership of the EU. Sweden supports efforts for competence development within the judiciary with the aim of strengthening law and order and increasing the people's confidence in the legal system. Swedish support goes to: joint cooperation between the Ministries of Justice of both countries, competence development within the police authority, joint cooperation project between prisons in both countries, improvement of the relations between the public prosecution authorities in both countries.
- The **G. Soros Foundation** cooperating with **Latvia**: Prison sentencing reform was an area of governance where significant progress was made in 2000. The SFL Prison Program and the Police Reform Program have helped introduce alternative sentencing mechanisms to more than half of Latvia's municipalities. In Saldus, for example, alternative sentences were given in 20 percent of cases in 2000, compared to zero in 1999. Next year, the Saldus local government will assume full financing of the alternative sentencing support mechanism. Other program activities worked toward reducing the percentage of pre-trial incarcerated persons; improving support and social rehabilitation mechanisms for ex-offenders; and improving health, education, and work opportunities during incarceration.
- The **International Union Against Tuberculosis and Lung Disease, IUATLD**, has a working group on TB in prisons, headed by Michael Kimerling (*see resource persons*).
- **Merlin** (Medical Emergency relief international) is a UK based charity with experience in TB control programmes in Siberia. Merlin also collaborates with the Public Health Research Institute, New York, in the Tomsk region of Russia (*see above*).

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- See also: www.phri.org/moscow82300.htm, Public Health Research Institute in New York
- WHO: DOTS-Plus pilot projects for the management of multidrug-resistant TB <http://www.who.int/gtb/publications/dotspluspilot/index.htm>
- and for general information on MDR-TB and DOTS Plus: <http://www.who.int/gtb/policyrd/DOTSplus.htm>

RESOURCE PERSONS:

- Rodolphe de Haller, former president of the Lungenliga and very familiar with the TB-problem in the former Eastern Block His address is: Dr. Rodolphe de Haller, rte de Jussy 282, 1254 Jussy, Tel. 022 - 759 18 60
- Paul Farmer, Director, Department of Social Medicine, Harvard Medical School, Boston, MA. Tel (617) 432-3715
- Michael E. Kimerling, International Union Against Tuberculosis and Lung Disease, University of Alabama at Birmingham, USA, kimerlin@lab.soph.uab.edu
- Hans Kluge, TB coordinator. WHO TB Project Office, Moscow, Russia, 2000
- Charles Well, Centers for Disease Control and Prevention (CDC), Office of International Tuberculosis Activities, Atlanta, USA
- Michelle Joterand, ICRC, Geneva, Switzerland
- Michael Levy, Corrections Health Service, New South Wales Australia, former WHO
- Francis Varaine, MSF, Paris, France

ANNEX 1

Planning for tuberculosis control in prisons

The following steps (based on page 27 of the WHO publication of the year 2000: "Tuberculosis control in prisons") are to be taken when a TB programme in a prison setting is planned:

1. Gain political commitment from authorities of the government in general and of the authorities of finance, health and prisons.
2. Perform and evaluate a situation analysis, focussing on the structural and administrative context as well as on the epidemiological context.
3. Confirm that financial support is available and the prison provision of shelter, food, water, and hygiene is acceptable.
4. Define the management structure. (Who is the lead agency? What are the respective roles and responsibilities of the various players?)
5. Establish or strengthen integration of TB services between prison and civilian sectors.
6. Define the technical policies (e.g. education and training programmes, treatment protocols, laboratory procedures).
7. Define the organisation of operations and resource needs (e.g. staff, supplies, organisation of treatment services, laboratory services including links to reference network).
8. Define programme monitoring system.
9. Document plan and secure funds (budget, workplan and time frame, including plan and timeframe for hand-over of responsibilities if external agency is involved).
10. Secure plan in a written agreement.
11. Implement plan.

ANNEX 2

Multidrug-resistant tuberculosis (MDR-TB)

Multidrug-resistant TB (MDR-TB) means that the TB bacilli of the patient are resistant to at least Rifampicin and Isoniazid, the two most powerful TB drugs. There is some evidence that treatment of MDR-TB in the frame of the DOTS strategy, i.e. with the first-line drugs, is virtually useless: a recent study in Vietnam found that the so-called re-treatment regimen commonly used in DOTS cured only 33% of the MDR-TB patients. This proportion is similar to historic outcomes when no chemotherapy for TB was given.

In 2001, the second report on global drug resistance rates was published. For patients with newly diagnosed TB, the median prevalence rate of MDR-TB was only 1.0%, but prevalence was much higher in Estonia (14.1%), Henan Province in China (10.8%), Latvia (9.0%), the Russian oblasts of Ivanovo (9.0%), and Tomsk (6.5%), Iran (5.0%), and Zhejiang province in China (4.5%). A statistically significant increase of the rate of MDR-TB was found in Estonia (from 10.2% to 14.1%). For patients with previous anti-TB treatment, the median prevalence rate of MDR-TB was 9.3%. Again, there was a significant increase in Estonia: from 19.2% in 1994 to 37.8% in 1998. A significant decrease was observed in the Republic of Korea.

Previous anti-TB treatment is a clear risk factor for MDR-TB.

The drugs for the common regimens used in DOTS cost only US \$ 10 to 20. Treatment of MDR-TB takes three to four times as long, is often accompanied by side effects and is much more expensive: in spite of recently finalised agreements that brought down the cost of second-line drugs substantially (by 48 to 97%), the drugs for treating MDR-TB still commonly cost 2000 to 3000 US dollars per patient.

It is essential that available resources be used efficiently to successfully treat drug-sensitive TB. Good treatment reduces the development of MDR-TB. Prevention of further development of the problem must be the highest priority. Well-running DOTS programmes are essential to confine the problem of MDR-TB. However, the following provide the rationale for treating MDR-TB patients also in low-income countries:

- a) Unless MDR-TB cases are treated, the DOTS strategy will slowly eliminate drug-sensitive TB but increase the relative contribution of resistant strains to the overall caseload. Treatment with first-line drugs often has a so-called 'amplifier effect': those strains of TB that are resistant gain additional resistance to further anti-TB drugs. It is true that proper treatment with first-line drugs prevents development of drug resistance in most patients. But it aggravates drug resistance in patients that already harbour resistant TB strains. Thus, where initial levels of drug resistance are substantial, DOTS on its own aggravates the problem of drug resistance.
- b) There should be no political or economic arguments against treatment of MDR-TB. In view of the long-term disastrous consequences of ignoring MDR-TB today, it is too expensive not to treat MDR-TB now. The longer the MDR-TB epidemic is being ignored the more difficult it will be to curb it later on. The neglect of TB control in New York City resulted in an outbreak of MDR-TB. More than 1 billion dollars had to be used to reverse the epidemic, and many lives were lost.
- c) There is a moral imperative to act. In view of the unprecedented degree of accumulation of wealth worldwide, the call is to treat the sick, not just the sick who can pay. A

differential value of life dependent on the origin of the patient (in highly industrialised countries second line treatments are available, where as those most in need in low income countries do not have access to a regimen that would allow cure) is unacceptable.

d) Since TB is airborne and international travel is increasing a neglect of TB control in low-income countries not only effects the populations of these low-income countries but also of many others.

Since 1998, the so-called DOTS-Plus, meaning DOTS that includes second-line drugs and thus can cure MDR-TB, has been promoted. It also has the support of the WHO. A sub-group of the so-called WHO Working Group on DOTS-Plus for MDR-TB, the so-called Green Light Committee has been set up. The Green Light Committee is in contact with the drug manufacturers that agreed to sell the second-line drug at much lower prices. The committee also sees to it that these drugs be only used in high-quality programmes so that the chances of inducing resistance to these second-line drugs are minimised. Applicant programmes around the world have approached the Green Light Committee, and projects have been approved in countries such as Russia, Estonia, Latvia, Peru, and the Philippines. Compared to the common DOTS strategy, DOTS-Plus differs in four aspects: 1. the use of second-line drugs; 2. Much longer treatment periods; 3. access to laboratory facilities not only for smear microscopy, but also for culture and drug-susceptibility testing; and 4. frequent occurrence of partly substantial side effects (due to partly rather toxic second-line drugs).