

# Fighting the "white plague"

## Zosia Kmietowicz

*Tomsk*— Poverty, homelessness, alcoholism, and malnutrition produced a tuberculosis epidemic in Russia after the break up of the Soviet Union in the 1990s. In some regions, rates are now starting to fall. **Zosia Kmietowicz** investigates.

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Jana is 19 years old, but looks closer to 12. She has just had three quarters of her right lung removed after it was almost completely destroyed by tuberculosis. Aivar Strelis, the head of tuberculosis treatment at Tomsk Hospital in Siberia, where Jana is being treated, hopes that Jana will be able to go home soon and that another 12-14 months on a combination of antibiotics will rid her of the infection in her left lung and that she will be able to pursue her ambition to study medicine.



**Men take their antituberculosis drugs at a dispensary in Tomsk**

Credit: STEVE TURNER

Jana is among the estimated 15% of Russians who have multidrug resistant tuberculosis. They might be resistant to just one or two of the standard first line treatments, or six or even seven drugs, including those used as second line treatments.

It is these patients who are the most difficult to treat, says Dr Strelis. They are confined to long stretches in hospital and make up the lion's share of those who need surgery (85%).

Rates of tuberculosis in Russia are the 12th worst in the world.

The incidence of tuberculosis in Russia is 85 per 100 000 population, although some regions are more badly affected than others. In Siberia, for example, the incidence is 133 per 100 000, more than twice WHO's average figure for Europe (50 per 100 000 for 2004).

The situation is not as bad as it was, however. The number of Russians infected with tuberculosis doubled in the 1990s, peaking in 2000 with an incidence of 90 per 100 000. But case notifications and deaths from the disease have showed a slow but steady decline in the last five years.

Oksana Ponomarenko, the head of the Moscow branch of Partners in Health, a non-governmental medical charity, describes the situation in 1997 as "catastrophically severe." The Soviet Union had been dismantled six years earlier and this plunged the country into economic freefall. Poverty, homelessness, alcoholism, and malnutrition were commonplace. And with a shrinking health budget and no access to even standard drugs, tuberculosis flourished.

Even before the break up of the Soviet Union rates of tuberculosis were high. But, says Ms Ponomarenko, "It was not such a problem." For a start there was a world renowned system in place to deal with it. Everyone in the former Soviet Union had an annual chest x ray; tuberculosis was diagnosed promptly; and treatment was available on demand. Tuberculosis incidence before the break up of the Soviet Union was 50 per 100 000.

Prisons in Russia were especially badly hit when the Soviet Union collapsed. Extreme poverty and drug addiction meant that petty crime became a means of survival for many. By 2000 the prison population had surged to nearly one million.

Poor conditions in prisons, and intermittent or ineffective treatment meant that multidrug resistant and progressive tuberculosis spread rapidly through prisons and then into the civilian population.

But people in the Tomsk region are fortunate to have had a string of foreign aid agencies working in the area for more than 10 years, starting in 1994 with the British medical relief charity Merlin. Funding from the Bill and Melinda Gates Foundation, the Open Society Institute founded by George Soros, and the Eli Lilly Foundation allowed the work to expand. Most recently the Global Fund to fight AIDS, Tuberculosis, and Malaria has allocated £10.7m (€15.6m; \$20.2m) towards tuberculosis care in Russia. The principal recipient of the grant is Partners in Health and projects started in the Tomsk region in December 2004.

The activities of Partners in Health mean that Jana will have no problems getting access to the drugs she needs, and with careful monitoring and an uninterrupted supply of second line drugs she has a good chance of a cure. But the journey to securing effective treatment has not been smooth.

International aid came with conditions attached; in particular doctors had to agree to introduce the WHO endorsed policy of directly observed treatment, short course (DOTS). But Russian doctors, who prided themselves on their expertise and autonomy, felt affronted by the imposition of a policy designed for controlling tuberculosis largely in Africa. They also questioned the practicalities of doling out tablets to a population that was widely dispersed and in a climate that can plummet to -50°C in winter.

But to gain access to drugs, doctors in Tomsk accepted the global protocols. At first, however, the regimens had no impact, uncovering instead the extent of the multidrug resistant tuberculosis in the region. To deal with this, Partners in Health introduced the DOTS Plus programme in 2000, which uses second line drugs for patients resistant to standard drugs.

Since then the incidence of tuberculosis in the Tomsk region has not altered. But prevalence has fallen from 253 to 203 per 100 000. And fewer people are dying from tuberculosis—figures show a drop from 18 to 15 per 100 000.

But the project is in its infancy, and only time will tell how uninterrupted treatment for tuberculosis will impact further on these figures.

The Global Fund project in Tomsk will allow 950 people with drug resistant tuberculosis to be treated over the next five years, as well as all those with susceptible (non-resistant) tuberculosis. Although a supply of drugs through WHO's Green Light Committee makes second line tuberculosis drugs available at the fraction of the usual cost— \$3000 per patient for a two year course rather than \$30 000—the budget means that places are limited. So far the signs look good: 15 months into the project 97% of patients on the DOTS programme are still registered.

However, Tomsk is just one of Russia's 89 regions. Increased foreign aid means that 26 regions were getting some funding towards tuberculosis control in 2002, up from just one region in 1993. A grant worth \$88m from the Global Fund signed off last October is aimed at helping the Russian Care Foundation provide treatment and care to socially vulnerable groups with tuberculosis, such as people who are homeless or disabled, current and former prisoners, people with HIV, and those with multiresistance—a population which makes up more than half of all new cases.

The extra funding may be what is needed to turn around the Russian tuberculosis problem. As Dr Strelis says, "A lot of work still needs to be done in other regions so that TB will no longer be a social disease."