Evolution of AIDS policy in the Soviet Union.

I. Serological screening 1986-7

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Until 1989 the AIDS pandemic had not created serious problems for the ministry of health of the USSR or for the Soviet government. The number of HIV carriers among the population of 285 million Soviet citizens was reported to be 112, only two of whom were actually reported to have developed AIDS. There were slightly more HIV carriers among foreign students and residents living in the Soviet Union and discovered by the mandatory screening in 1986 and 1987, but they were deported to the country of their origin. All known Soviet HIV carriers were isolated in a special epidemiological hospital in Moscow. The situation seemed under control. The medical authorities did not start a serious publicity campaign to warn people about the risk factors and alert them to preventive measures as did the campaigns undertaken in many other countries. As a result the AIDS epidemic which broke out among children in the town of Elitsa in the Kalmyk Autonomous Republic at the beginning of 1989 took both medical authorities and the population at large unawares. Within a few weeks 31 children and seven mothers were found to have been infected by the multiple use of poorly sterilised hypodermic needles in the Central Children's Hospital. The numbers seemed to be rising.[1] Similar outbreaks of AIDS among children were also discovered later in large cities, Volgograd and Rostov on Don. These too were linked to the local hospitals, and again the inadequate sterilisation of multiple use needles caused the HIV infection.[2,3] At the end of December 1989 the official number of HIV carriers among Soviet citizens was 428, 23 of whom had developed AIDS; 14 had already died.[4] Both the authorities and the public began to suspect, however, that the actual size of the AIDS epidemic in the Soviet Union might be substantially underestimated and that they were paying the price for the complacency of previous years, when AIDS had been considered a typical "Western" disease confined to risk groups that "officially" did not exist in the Soviet Union.

In 1986 and 1987 Dr John Seale and I suggested that poor sterilisation facilities and the acute shortage of single use disposable syringes in Soviet hospitals made the hospital population the main group at risk of AIDS there.[5,6] Hospital patients already represented the main risk group for hepatitis B infection. Our suggestion that AIDS already existed in the Soviet Union was based on a reported increase in the incidence of Kaposi's sarcoma diagnosed and treated in Moscow hospitals in 1983, particularly in young people.[7]

At the second international AIDS congress in Paris in June 1986 Professor V M Zhdanov, director of the Moscow Institute of Virology, reported the case of a girl who had first developed AIDS in 1985 and who might have contracted the virus through a blood transfusion.[8] Zhdanov's report was not, however, confirmed in a Soviet medical publication,[9] nor was this case included in the results of the first Soviet screening for HIV carried out in 1986.

TABLE I—*Number of people in the USSR tested during January to June 1986 for antibodies to HIV*

Region of permanent residence	No of tests	Positive for HIV
USSR	5155	0
Africa	1851	20
America	1559	0
Asia	1542	0
Europe	1460	0
Total	11567	20

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First screening for HIV antibodies in Moscow in 1986

The first screening for AIDS in Moscow was carried out in 1986 by a team from the Central Institute of Epidemiology of the Ministry of Health of the USSR, headed by Professor Valentin J Pokrovsky, director of the institute and president of the Academy of Medical Sciences of the USSR. The full results were not published until July 1987.[10] The screening had a dual purpose—to identify the main risk groups in Moscow and to compare the locally produced test system for HIV infection with imported test kits. The ministry of health had to select a reliable diagnostic system for mass production, and several research institutes were working on the problem.

In all, 11567 people were included in this first screening: 2015 were patients of venereological clinics; 154 were homosexuals; 11 were drug addicts; 1762 were patients with various rare diseases, some of them undiagnosed; and 7790 were healthy students, both foreign and Soviet. Table I summarises the results. HIV infection was identified in 20 people (17 men and three women) aged 25-35. Three of them had another sexually transmitted disease, three were patients of different clinics, and 14 healthy students were found to be positive for HIV. The distribution of the HIV-positive individuals according to country of origin clearly pinpointed Africa as the centre of infection. Two students had already developed clinical forms of AIDS. Sixteen people had generalised lymphadenopathy, and two had no other symptoms. Fourteen of the HIV positive students had lived in Moscow for only one to seven months and it was therefore unlikely that they had been infected there. Six of those tested positive reported sexual contacts with Moscow residents, some of them casual. Eventually three sexual partners were found, but they were negative for HIV.

The main conclusion of this study was essentially reassuring. All those found to be infected with HIV in Moscow were foreigners of African origin. It seemed that there was no serious danger to Russian population. The infected foreigners were deported. A second, more comprehensive, screening of foreign students was scheduled for 1987. It was to include students not only in Moscow but also in other major cities. New rules for admitting foreign students now included extensive medical tests, including a compulsory test for HIV infection (to be repeated annually). No active campaign for AIDS prevention to give proper warning to the population was considered; research into the condition was extended, but not very intensively.

Second screening in 1987

A second screening for HIV infection was started at the end of 1986 and completed in May 1987. Its full results were published only at the very end of 1988.[11] The main findings seemed to have been reported to the government during the summer of 1987 and produced a significant change in the official attitude towards the AIDS threat and some legislative measures. The screening included Moscow, Kiev, Tallin, Minsk, and the capitals of other republics as well as some big cities like Krasnodar and Kharkov that had foreign student communities. The research team used the new Soviet test system which was compared with several Western diagnostic kits, and positive results were confirmed with more complex laboratory methods (western blotting). Foreign students (and some other aliens) from 188 countries were included in the screening. More than 80000 people were checked by

TABLE II—*Number of people in the USSR tested during November 1986 to May 1987 for antibodies to HIV*

Region of permanent residence	No of tests	Positive for HIV		
		Total	M	F
USSR	43 483	26	16	10
Africa	9 788	192	161	31
America	6 879	5	4	1
Asia	14 276	0		
Europe	5 114	3	3	0
Australia and Oceania	89	0		
Total	79 629	226	184	42

the programme. The results (presented in table II) showed a rather different picture from the one found the previous year in Moscow.

Most of the 226 cases of HIV infection showed that African students were the main risk group. The distribution of those infected according to their country of permanent residence indicated that students from Zambia, Uganda, Rwanda, Burundi, Malawi, and Zimbabwe were highly infected (from 5% to 29% were infected with HIV). The second level of risk (from 1% to 5% infected with HIV) was found in students who originated from Tanzania, Kenya, Congo, Zaire, Chad, Mali and Guinea-Bissau. Students from Mozambique, Angola, Ethiopia, Nigeria, and other African countries had an incidence of HIV infection below 1%. Most cases of HIV infection in Soviet citizens were found in risk groups similar to those in the West (homosexuals, bisexuals, prostitutes, drug addicts). Among prostitutes, only those who had had contacts with foreign clients were HIV carriers.

The spread of HIV infection since 1986 was obvious. None the less, the Soviet ministry of health expected to be able to prevent an epidemic primarily by legal methods. All foreigners infected with HIV were deported and all infected Soviet citizens were apparently isolated in hospitals. Special rules now made HIV tests mandatory for all foreigners who planned to stay in the Soviet Union for longer than three months. Western visitors, however, could be tested in their own countries and present medical certificates with their visa application. All Soviet citizens returning from Africa and all sailors were required to have HIV tests.

Decree against AIDS

On 25 August 1987 the Presidium of the Supreme Soviet of the USSR passed a decree on prophylactic measures against AIDS infection. The requirement that all foreigners living in the USSR have HIV tests was made law. If they refused to have a test voluntarily coercion could be used (the police were instructed to assist the medical authorities) or they would be expelled from the country. Citizens (both foreign and Soviet) who knew that they were HIV carriers but who nevertheless took risks that created the danger of transferring the infection to others would be charged with a criminal offence. They could be sentenced to five years in prison. Those who were found responsible for actually transferring the infection could be sentenced to eight years of "deprivation of freedom." These severe penalties were considered to be necessary deterrents. In practice the law meant that HIV carriers could be isolated from the general population in special camps if they did not follow strict regulations. Apparently the prostitutes identified as positive for HIV in this screening were detained in 1987. Anonymous AIDS diagnostic centres were established in several large cities. Those who were tested could find out the results by telephone and get proper advice.

From June to August 1987 about one million people were tested for antibodies to HIV. Commenting on the new legislation, A I Pokrovsky suggested that although the active quarantine of people positive for HIV or those with symptoms of AIDS was not required by World Health Organisation regulations, individual countries had the right to decide for themselves what effective measures were needed to prevent an epidemic.[12] He welcomed the forced isolation of people infected with HIV as a lesser evil. In other words, the authorities still expected that these measures would prevent an AIDS epidemic in the Soviet Union. Homosexual activity, prostitution, and intravenous injections of drugs were illegal in the Soviet Union, which meant that promiscuous homosexual activity and drug addicts sharing needles were officially unknown—and that the police were ill informed about the real scale of these activities.

The next article will give details of the index cases found in 1987, the outbreaks in Elista and Volgograd in 1989, official reactions, and the progress of measures to counter AIDS in the Soviet Union.

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ANY QUESTIONS

A patient reports that his psoriasis has been kept under control for many years by his rubbing his urine into the lesions. Is this a chance improvement or is there a clinical explanation?

Urine is certainly a versatile fluid, freely available, usually sterile, and produced at body temperature so its folkloric uses are legion. Perhaps its best known use in skin disorders is its application to chilblains, which is said to be a Russian remedy, but its use in psoriasis seems to be unrecorded. The urea content might act as a mild keratolytic and so help to remove the scales, but at a concentration of only 2% or so I doubt that this can be relevant. I would suggest that this patient's experience reflects the natural and spontaneous remission of psoriasis, which initially coincided with his first use of urine, and he has attributed its continued remission with continued use.

Although the molecular and cellular biology of psoriasis is slowly being unravelled, the exact cause of psoriasis and the mechanism of action of the empirical remedies used are still unknown, so it is always possible that this patient may have as a byproduct in his urine the vital ingredient for the treatment of psoriasis. Perhaps the questioner might consider organising a double blind clinical trial?—A B SHRANK, *consultant dermatologist, Shrewsbury*