tetrohydroaminoacridine or tacrine. This has recently received approval in the United States for the treatment of Alzheimer’s disease and applications are being made to European licensing authorities. In general, anticholinesterases show some benefit in trials, but it is modest and limited by cholinergic side effects; the aminoacridines can also cause disturbance of liver function. Nevertheless, the anticholinesterases represent the first recognised treatment for what has hitherto been considered an untreated degenerative disease.

Explaining the disease and the prognosis to the family is very important, and an understanding of where the major cognitive deficits lie can be valuable. Treatment of systemic illness is important, as is avoidance wherever possible of drugs and alcohol, all of which can reduce cognitive function. Occasionally, treatment of troublesome behaviour is necessary, but neuroleptic drugs need to be used with care since patients with cortical Lewy bodies can have dramatic worsening of the extrapyramidal syndrome. Early access to community support is valuable and will usually mean alerting the community psychiatric social worker. Thought should also be given to arranging power of attorney while the patient is still able to understand the legal implications. Driving always presents difficulties, and once the diagnosis has been made the patient should inform the Driver and Vehicle Licensing Agency. The decision of when to stop driving is very much an individual matter, and patients with predominant language impairment may still be able to drive whereas patients with early visuospatial difficulties may not.10 The Alzheimer’s Disease Society provides valuable support and information leaflets.

As the molecular pathology of Alzheimer’s disease is understood in terms of abnormal phosphorylation of tau and abnormalities of amyloid precursor protein metabolism and amyloid deposition, animal and cellular models can be developed. Considerable effect is now being directed towards therapeutic strategies that might prevent progression of the disease. Although this is for the distant future, there is now a real sense of hope that effective and specific treatment of the disease process will be available.

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**Russian Report**

**Health care in Moscow**

Michael Ryan

In the Russian Federation privatisation is affecting the health care sector as much as it is industry and commerce. That the general public support the transfer of state clinics to the private sector is a mark of their dissatisfaction with the old state run system. Doctors too see better opportunities to practise good medicine and be paid better for doing so. In Moscow the health department has set up a commission to license all clinics providing treatment, which should ensure standards of safety, training, and equipment. The Russian Federation is also trying to establish a medical insurance system to cover its citizens for health care, but in Moscow and elsewhere its implementation has been delayed by arguments and bureaucracy. In the meantime the health of Muscovites remains poor, with a high incidence of birth defects, and illnesses among the young.

“The panacea for all economic ills is privatisation.” So runs the slogan which encapsulates the Russian government’s momentous strategy not only for industry and commerce but also for services such as the delivery of health care. The private ownership of hospitals and other medical units is seen as a crucial determining factor in the operation of the new system of “insurance medicine.”

While some private units will be brand new, others will be housed in former state owned property made available by the relevant local government authority. Far from arousing widespread hostility, as it would in Britain, this strategy for the transfer of building commands substantial support among ordinary Russians. Evidence of this can be found in the responses given to one question in a public opinion survey carried out in Moscow during January 1992.

**Support for private medicine**

The question asked whether the transfer to private ownership of [public] hospitals, polyclinics, and other medical establishments should be permitted in the
city. Half the respondents said yes. Those against represented 35% of the sample of 1000, while the remaining 15% were undecided.1

Support for so radical a policy can be construed as the corollary of the massive—and justified—discontent with the poor service which the state system provided over decades. In 1990 the former Soviet government, recognising the urgency of radical reform in the health sector, published draft legislation which would have totally recast the organisation and financing of health care. Its central concepts were largely replicated in the Russian Federation’s law on compulsory medical insurance which President Yeltsin signed in July 1991.

Some of Russia’s leading doctors had helped to shape the provisions of that law, and they probably saw “insurance medicine”—with its concomitant of a substantial private sector—as the way out of a horrifying blind alley. A summary judgment about the severely cash starved health service of the Communist past appeared recently in the newspaper Meditinskaya Gazeta: it may well represent a widely shared view among an elite of farsighted and dedicated doctors.

As a surgeon with 32 years’ service, Aleksandr Bronstein can be believed when he declared: “I know what it means to operate when there is nothing to operate with. I know what a bad doctor is, and a bad hospital. I remember virtuoso surgeons who left medicine because they were paid chicken feed. In a word, I understand what ‘free medicine’ is. And, believe me, nobody gained from this cheap deal: neither the doctors nor our patients. That is why we have started a new enterprise with such high hopes—we are setting up our own private clinic.”

A fragmenting federation

Almost by definition the driving force of individual enterprise will be demonstrated unevenly in the vast territory which is Russia. For that reason alone, private health care facilities are likely to emerge more rapidly in some towns than in others. Another reason is that the regions (using that term somewhat loosely) now have sufficient autonomous power to thwart the policies and instructions of Boris Yeltsin’s central government.

Nationalist movements, so influential in the historic collapse of the Soviet empire, have also had, and continue to have, a disintegrative impact on the politico-administrative arrangements of the Russian Federation. The first of these regions to become largely self governing was the homeland of Moslem Tatars, now called Tatarstan, the capital city of which is Kazan on the river Volga. With the additional confidence afforded by rich reserves of oil, the area declared its political independence as early as August 1990.

Moreover, even among ethnic Russians in the provinces moves towards self determination are much in evidence. For example, on 1 July 1993 the regional Soviet of the Sverdlovsk region decided to change its name, and its constitutional status, to Republic of the Urals. The Chelyabinsk, Perm, Orenburg, and Tyumen regions may well follow suit and renounce their current status in order to form an integral part of that new republic.

These moves towards greater self determination are heavily influenced by resentment towards what is perceived as the plundering of industrial profits by the central government for redistribution throughout the federation in the form of subsidies. That the provinces are in a strong position to get away with such action is largely explained by the continuing challenges in Moscow to the authority of President Yeltsin. His need for a new constitution which would deal with the persistent hostility and obstructionism of the Supreme Soviet means that he cannot afford to alienate support from regional leaders, however qualified or conditional it may be.

Licensing in Moscow

Given that the governance of the Russian Federation is now so problematic, newspaper accounts of social policy developments usually report what is happening in specific regions or towns and do not attempt to elucidate their typicality or otherwise. What follows is concerned almost exclusively with the city of Moscow, with no implication that it points to any emerging countrywide pattern.

In the move towards privatisation Moscow’s city authorities seem to be determined to ensure that patients should be protected against the consequences of unregulated commercialism in the health sector. At the Moscow Health Department a licensing commission has been set up to licence institutions which provide treatment (this will apply also to those in public ownership) and the surgeries of all doctors who engage in private practice. A licence will be refused if the unit fails to comply with requirements for such matters as fire safety, public health, qualifications of staff, and the availability of equipment.

By mid-June the first 30 licences had been issued, and the exercise is expected to be completed by the end of this year. A licence confers the right to engage in medical practice, and all units which have one are obliged to display it prominently. This arrangement is intended to ensure that Muscovites receive some guidance as consumers in “the very extensive market of medical services.”

A related matter which also concerns potential danger to the physical and psychological health of many people—for whom everyday life brings tribulation enough—is the position of psychic healers and practitioners of folk medicine. Though they are far from a new phenomenon in Russia, their numbers have probably multiplied rapidly in the turbulent period of transition from Communist rule. Certainly Moscow’s licensing commission became sufficiently concerned over the effects of charlatans among this group to set up a special subcommission on folk medicine, and from now on practitioners will be required to hold a licence. A necessary but not sufficient condition for its issue will be possession of a medical diploma; in addition, the methods of treatment being offered—and the outcomes—will be assessed by experts.3

A scheme delayed

Though interlinked conceptually, in the real world the emergence of a private sector and the implementa-
tion of medical insurance have become decoupled. Six months after it was due to come into force the new system was still in abeyance, which prompted Nezavisimaya Gazeta to ask: "What (or who) is holding up the transition to more civilised forms of work?"

From Igor Stupakov, vice chairman of Moscow's Commission for Health Care, came a depressing account of muddle and filibustering.

He said that his commission had hoped to make a start on initial preparations back in the spring of 1992 and requested the city administration to set up an interdepartmental committee with responsibility for overseeing the introduction of medical insurance. However, the response was that existing structures of executive power could cope with the problems. Experience soon disproved that.

After further approaches from Stupakov's commission the city administration established a working party consisting of administrators and elected representatives (deputies). Some lost time was made up, but progress then faltered because of disagreements over appointments to the board of management for the territorial fund for compulsory medical insurance. Some deputies seemed not to understand the relevant legislation, and one of them, despite being a vocal critic of the scheme, attempted to obtain a post on the board.

The delays were costly; the city froze 29 billion roubles earmarked for spending on health care.

Stupakov noted that the process of creating territorial funds—key pieces of machinery—was behind schedule elsewhere in the country. And the fund for the federation as a whole (a sort of overlord) only came into existence at the end of May this year. Its executive director is Vladimir Grishin, who appears to be an ideal "progress pusher." Qualified in both medicine and economics, at the age of 36 he also has the advantage of youth. As for previous experience in policy formation and implementation, he was an adviser to the former USSR Supreme Soviet on health care matters and held posts at the USSR Health Ministry and the Russian Ministry of Finance.

Gains in prospect

At present it is an open question whether insurance medicine will be operating in Moscow even one year after its scheduled inception. But if by then every resident has his or her insurance policy truly revolutionary changes will occur. For example, patients will no longer be automatically assigned to their local polyclinic but will have a choice of doctor and health care unit. Consultation and treatment will entail no cost to the patient since responsibility for meeting the item for service charge rests with the insurance company.

For medical staff one great advantage of the scheme is that their remuneration should be directly related to the quality of care which they provide. Admittedly the play of economic forces will also result in some medical units becoming redundant and doctors finding themselves without jobs. Unpleasant as that future may be, it seems unavoidable if, as Stupakov states, many units are working at only 40-50% of their planned capacity.

The insolence of office

In Moscow health indicators have shown the urgent need for proactive policies for some time, and yet more distressing statistics appeared very recently. Surveys show that about 70% of newly born infants have pathological conditions, over 8000 people are classed as "invalids from birth," and out of every 1000 teenagers 21 enter adult life with an illness.

These facts make it seem all the more puzzling that the Russian Health Ministry is thwarting a major initiative designed by the British Institute of Brain Chemistry and Human Nutrition in collaboration with the charity International Integrated Health. The objective of their five month pilot programme is to provide some 93 000 women of childbearing age in central Moscow with a nutritional supplement which would provide 0.8 MJ (200 kcal) a day, plus a full range of vitamins and trace elements. By so doing they would help to prevent an epidemic of birth defects among children born next year after a winter during which many expectant mothers will probably be unable to afford a healthy diet.

The stumbling block is the fact that the formula contains milk reconstituted with vegetable oils, and this is classified as a food by the Health Ministry. One of the conditions attaching to the European Community's loan for food and medical supplies to Russia is that food must be sold through the normal retail network and cannot be distributed free to a specific population group (R Ridgway, International Integrated Health, personal communication).

So this lifesaving nutritional programme is stalled because of an adverse bureaucratic decision and the myopia which underpins it. The evidence leads to the conclusion that the Russian Health Ministry needs to be powerfully prompted to act on behalf of unborn children.

2 Advertisement in Meditsinskaya Gazeta 1993;No 52:8.

BIODiversity BASICS

The cell

Cells are the triumph of evolution. The rest of evolution can be thought of as an elaboration on this masterpiece. In some ways they are more complex than the organs to which they give rise, with the possible exception of the brain, in that their behaviour reflects the integrated activity of about 50 000 genes, their products, and the complex biochemical and structural networks that result.

In this biochemical network there are two different time scales. The first, which responds to changes in seconds or fractions of a second, is that concerned with metabolism. The enzymes in the cell cytoplasm, including the mitochondria, catalyse molecules along narrowly defined reaction pathways such as the Krebs cycle, the synthesis of purines, or the breakdown of carbohydrates. Many of these reactions require or generate energy in the form of ATP. The speed of response of these metabolic pathways can be contrasted with those in the second system, which controls the synthesis and cellular disposal of macromolecules such as nucleic acids and proteins. Here the response times are minutes to hours. Understanding the integration of these two interdependent pathways is a major problem in cell biology.