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The Russian health care system today: Can American-Russian CME programs help?

ABSTRACT

The health of the Russian people has deteriorated dramatically since the fall of communism, due particularly to cardiovascular disease. The Eurasian Medical Education Program was developed in response to provide continuing medical education for Russian physicians. Programs are directed mainly toward primary care physicians and focus on outpatient management of diseases that cause high rates of mortality and morbidity. This experience provides an opportunity to assess the structure and functioning of the Russian health care system and emphasizes the importance of general internal medicine training in detection, management, and prevention of disease complications.

CAN AN AMERICAN-RUSSIAN collaboration in continuing medical education (CME) improve the health of Russian citizens?

The health status of Russians has dramatically declined since the demise of the Soviet Union and the establishment of the Russian Federation in 1991.[1–3]

Dr. Mark Field,[1] who has studied the Russian health care system for 40 years, notes that "one of the major aspects of the Russian health and demographic crisis is that since 1992 . . . the population has been in a state of decline as deaths surpass births." Cardiovascular disease in particular has taken its toll, with rates of disease in Russia five to six times higher than in the developed countries of the West.[1]

Dr. Field attributes these trends to several factors: "the deteriorating financial situation of the majority of the population, an inadequate and unbalanced diet, stress including uncertainty about the future, and an ever greater predilection for harmful habits such as drinking, smoking, and drug abuse."[1]

According to the Russian Academy of Medical Science,[2] Russian men face the worst health prospects in the world. Life expectancy for men reached its nadir in 1994 at 57.7 years and has increased very little since then—in 2000, it was still only 58.9 years for men and 72 years for women.[4]

Life expectancy for Russian men was 59 years in 2002

Births have also decreased, so that the birth-to-death ratio has decreased from 2.5 births to 1.5 deaths in 1987 to 1.2 births to 2.1 deaths in 2000.[4] This has resulted in a net loss of about 750,000 people a year.[5]

Men between the ages of 40 and 55 have suffered the largest impact in health,[6] owing to hypertension, cardiovascular disease, smoking, alcoholism, unhealthy lifestyles, and stress.[1,2,4–8]

Cardiovascular diseases (myocardial infarction, stroke, heart or renal failure) cause more than half of all deaths, and Russia has the highest incidence of cardiovascular disease in the world.[4,5,8] These diseases are also the main cause of disability.[5] The World Health Organization estimates that about

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60% of adult Russian men have hypertension, a rate confirmed by interviews with health department officials. In addition, 67% of men smoke (up from 53% in 1987),[5] and smoking in women has also increased from about 10% to 25% during the same period.

Other chronic diseases (diabetes, chronic obstructive pulmonary diseases, and alcohol-related liver diseases) also create a burden in terms of use of health care services and disability of people who could be productive members of society.[6] Infectious diseases are on the increase, particularly tuberculosis, HIV/AIDS, and hepatitis. The overall incidence of tuberculosis is about 10 times that in the United States and is a particular problem in prisons.[5]

THE RUSSIAN HEALTH CARE SYSTEM

The Russian health care system is massive, with many more physicians, many more and larger hospitals, and many more health care workers than almost any other country in the world.[1,5,9,10]

The Russian health care system is massive, and utilization is high

Utilization of health care is also greater. The average length of hospital stay is about three times longer than in Western Europe and North America. Russian citizens consult a physician an average of 10 times a year, far more often than in other industrialized countries.[5]

Despite attempts at health care reform over the past decade, many practices and the basic structure of the health care system remain virtually unchanged from the Soviet era. During that era, health care was considered a major asset to the government and the people and was widely praised.[9] The Soviet systems of emergency care, primary care, referral to specialists, hospital care, and return to the primary care system were seen as exemplary. In addition, its preventive care was said to be among the best in the world.[10,11]

Following the breakup of the Soviet Union, the health care system lost much of its subsidy and has had to become efficient. This has resulted in a deficiency of modern equipment and even shortages of drugs.[12]

Perhaps the most significant deficiency, however, was the isolation of the Soviet medical profession from the rest of the world. Journals, textbooks, and medical reports that are widely circulated in Western countries were often not available; after the Russian Federation was formed,these became available but were not affordable. Thus, Russian physicians often had trouble keeping up with modern medical advances—and still do.

Polyclinics: Core of the Russian health care system

The core of the Russian health care system are large outpatient facilities called *polyclinics*.

Polyclinics, identified by number, usually serve a specific geographic area; for example, Polyclinic No. 18 in Kazan serves a population base of 77,000 people. They usually handle a large number of outpatient visits; Polyclinic No. 3 in Khabarovsk has an average of 1,300 patient visits per day. Polyclinics may or may not be associated with a hospital. They employ general physicians (called *therapists*) and various specialists.

Overall, the polyclinic system shares many similarities with the health care delivery system in the United States, although there are differences. The most striking difference is that polyclinics often use "traditional" (scientifically unproven but widely used) therapies such as therapeutic ultrasound, laser therapy, ultraviolet irradiation, and hyperbaric oxygen chambers.

Care is fragmented by disease

By Western standards, Russian medical care is fragmented, with many physicians highly focused on one disease such as diabetes or tuberculosis. Inpatient care and ambulatory care facilities are often separate. Nevertheless, in theory there is a very logical progression of health care service from the primary to the tertiary level.

Certain diseases (eg, diabetes, tuberculosis, asthma, cancer, and mental illness) are "sequestered," ie, given special attention. Patients with these conditions are registered, are treated by specific doctors, and receive medications free from the government.

Access to a physician is free for all patients, but medications, except those for sequestered conditions, must be purchased. Appointments are typically made in the polyclinic lobby, where patients sign up in a book for a 15-minute visit.

Hospitals: Large, small, and specialized

Hospitals vary in size from about 50 beds for small rural hospitals up to about 1,000 beds. An amazing array of specialty hospitals exists for pediatrics and obstetrics (these may not be located conveniently to each other), tuberculosis, other infectious diseases, oncology, psychiatry, and emergency care. Coordination of care in this system would be difficult for American physicians to understand.

A major difference among the various hospitals is the amount of high-tech equipment they have. Increasingly, specialty hospitals have equipment similar to that found in US hospitals, but smaller or rural hospitals do not.

Most patients are housed in wards rather than in private or semiprivate rooms, often with 8 to 12 patients per ward.

Doctors, nurses, feldshers

Typically, physicians work in a hospital or a polyclinic, but seldom in both.

Although there is a large number of nurses, they are trained primarily to provide comfort care and have a relatively low professional status.

A unique feature of the Russian health care system is a worker called the *feldsher*, whose function is similar to that of a nurse practitioner in the United States. The feldsher is often the frontline health care provider in rural areas, and provides emergency care, maternity care, and preventive care.

A small two-room facility in a village usually employs two feldshers, who serve as many as 1,000 people. The Soviet system took great pride in the feldsher function, which was considered a key element in the health care system.[11]

MEDICAL EDUCATION

Undergraduate medical education

The Russian system of health care education has many similarities to that in Western Europe, but is considerably different than the system in the United States. Russian students are about 18 years old when they enter medical school (directly from the equivalent of high school) and complete their undergraduate education in 6 years.

Different faculties within the medical university train students in adult medicine, pediatrics, public health, and dental medicine (stomatology).[10] These faculties are separate from each other, and students do not have extensive experience outside of their faculty; a student is trained to care for either adults or children, but not both.

For example, there are currently 1,620 students in adult medicine and 693 students in pediatrics at the Urals State Medical Academy. In addition, 521 students are in the public health faculty, which includes hygiene/sanitation, bacteriology, and epidemiology.

Each state medical university must follow the same curriculum mandated by the Federal Ministry of Health, but is allowed flexibility to change 15% of the program according to local medical problems and teaching traditions.[9]

Postgraduate medical education

Postgraduate medical education consists of residency programs, internships, and primary specialization.

Residency programs. In the Urals State Medical Academy, about 50 of 2,000 graduates per year enter residency programs, which generally last for 2 years. These programs emphasize clinical training, but also may lead to an academic or research career.

Internships. About half of all graduates enter federally funded internships, which are usually located in urban or larger hospitals, while the remainder enter internships that are predominantly on-the-job training (internships are generally for 1 year). The vast majority of medical school graduates become "therapists" after their year of on-the-job training.

Primary specialization. In addition, some new physicians undergo 4 to 10 months of primary specialization training in a narrow field such as diabetes. Since diabetes is a registered (or sequestered) disease, only physicians with training in diabetes are allowed to care for such patients.

The Russian health care system is regarded as overspecialized, but in reality, the postgraduate training time for Russian physicians is far less than for their counterparts in the

Russian health care is seen as overspecialized and fragmented

United States in the same specialties.[1,4,5,9,10,12]

Over the past decade, a movement to develop family medicine has been under way, mainly encouraged by external sources but recognized by the Federal Ministry of Health. Therapists and pediatricians have been retrained (usually in a 6-month program) to care for adults or children and to perform certain procedures. Khabarovsk has had an academic department of family medicine for 10 years; this program trains recent medical school graduates as well as more experienced physicians in a formal, 2-year curriculum analogous to that in other specialties.

General internal medicine is called "internal diseases," and there are now academic departments with a 2-year training program. Much of the experience is outpatient-based and overlaps that of general physicians (therapists), family physicians (in the small number of centers in which this specialty exists), and various specialists.

Training programs in general internal medicine are only moderately participatory by US standards, as they are mainly observational and without much procedural involvement. Nevertheless, given the staggeringly high incidence of heart disease and other chronic illnesses, the emphasis on outpatient care, and the remarkable overutilization of services by patients, internists could play a major role in improving Russian health care.

Internists could play a major role in improving Russian health care

Continuing medical education

After completing the medical university and postgraduate training, the typical Russian physician begins practice in a polyclinic or a hospital.

CME is not mandated by law, but it is necessary from a practical perspective because of a system of "categories" for physicians. Every 5 years a category must be confirmed, which requires attendance at CME programs (from 144 to 488 hours over a 5-year period) and passing a federally mandated examination. This allows the physician to be certified, which in turn permits him or her to receive a higher salary.

In addition, physicians must undergo the equivalent of relicensure. Although separate, confirmation of category and licensure are intertwined, and both are granted by the (local) states.

CME programs are generally conducted by medical universities or academies. For example, last year the Urals State Medical Academy in Ekaterinburg conducted CME courses for 2,500 physicians.

Therefore, attending CME courses affects a physician's employment, status, and salary. In Soviet times, it was mandatory to obtain CME credits, and physicians spent about 4 months attending daily lectures every 5 years. Although this system has eroded somewhat, academic physicians are still greatly interested in the most effective way to achieve CME benefits.

THE RESPONSE: THE EURASIAN MEDICAL EDUCATION PROGRAM

The Eurasian Medical Education Program (EMEP) was developed to address the needs of Russian patients and physicians by providing CME. The American authors of this paper (R.G.F. and H.M.G.), who had previous experience with the Russian health care system and CME,[13–15] helped develop the program. It emphasizes the diseases that cause the most mortality and morbidity in the Russian Federation: cardiovascular disease, diabetes, and tuberculosis.

The EMEP is a partnership among several institutions: the American College of Physicians-American Society of Internal Medicine (ACP-ASIM); the US Institute for Health Policy Analysis; and the Urals State Medical Academy in Ekaterinburg, the Kazan State Medical Academy in Tatarstan, and the Far Eastern Medical University in Khabarovsk. It is fully integrated in the CME programs of each institution.

The philosophy of EMEP is to become partners with Russians at three levels: governmental, academic, and clinical. Visiting professors of the EMEP are experienced ACP-ASIM educators and clinicians who serve on a voluntary basis.

CME programs have been organized at each location for physicians directly responsible for patient care, and include lectures and visits to polyclinics for direct patient contact.

Programs regarding treatment of complications are directed to hospital specialists.

Beyond CME

We are also involved in "teaching the teachers," ie, those who teach the Russian CME programs. We provide written handouts and slides in Russian for the teachers to subsequently use. We estimate that in this way about four times as many physicians are exposed to our programs and curriculum.

Although the initial vehicle is CME, the EMEP has expanded in each location into related clinical aspects, including specific programs such as a women's health program. Our collaboration included advising physicians in an academic polyclinic regarding care specially designed to meet the needs of women.

Public education materials have also been developed that address issues such as tuberculosis prevention, hypertension, cardiovascular disease, and lifestyle issues. We have participated in health fairs and "hypertension schools," in which patients and the public are educated in cardiac disease prevention.

The most extensive EMEP programs are in data collection in cardiovascular disease and diabetes; we have assisted in collecting data regarding the care of more than 1,500 patients over a period of about 2 to 4 years.

In the 4 years in which the EMEP has been functioning, we have conducted 35 programs involving about 4,500 Russian doctors. This has given us a broad perspective on the functioning of the health care system, and particularly on the activities of physicians.[15–17] We have found many highly dedicated physicians working under difficult conditions and often with fewer medications and less equipment than their counterparts in Western Europe or North America.

This experience leads us to believe that physician exchanges and the sharing of knowledge can benefit the Russian population and create a unique professional and cultural experience for visiting American physicians.

SUMMARY

The Russian health care system remains an essential feature of the social fabric of the Russian Federation, as it was in Soviet times. In the past decade, the health status of the Russian population has declined considerably, owing to social, economic, and lifestyle changes. The diseases afflicting Russians are familiar to American physicians, but they often occur at an earlier age than in the United States.

The Russian health care system remains organized and logical in structure, and CME continues to be strong. Therefore, physician exchanges are beneficial to improving health in Russia. At no time in recent memory has the opportunity to form partnerships with Russian physician colleagues been greater, and the program described does just this, working within the Russian CME and health care systems.

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