

Medical Education and Postgraduate Training in Russia: an update

Keywords

Medical Education; Postgraduate Training; Medical Literature; Russia

Abstract

The aim of this article is to overview some aspects of medical education and postgraduate training in Russia during the last 5 decades. Apart from review of literature, it is based on observations by the author since the 1970s. After the 6-year undergraduate medical education, to become a specialist in any field of medicine, a 2-year postgraduate program (ordinatura) without a preceding internship has been the usual way. In 2016 the internship was abolished; so that the postgraduate training has on average become shorter. Less common is a 3-year program (aspirantura) that includes research for a candidate's thesis. Previously, certificates of medical specialists could be obtained after a 1-year internship. Insufficient quality of training was pointed out by several experts. After completion of the postgraduate training, medical specialists must go every 5 years on a continuing education course up to one month long. Last time, many online courses have been developed; while their quality is improving thanks to the availability of foreign literature on the Internet and advances of health information technology. Several specific drawbacks of medical education and postgraduate training are discussed. Without profound restructuring, the system of postgraduate training in Russia can be adapted to the international standards if its options (2- and 3-year programs) would be transformed into consecutive steps. The total postgraduate training time would thus amount to 5 years, include preparation of a thesis and examinations to be awarded a degree equivalent to M.D. and a specialist certificate. Physicians not interested in research could prepare a thesis in a form of a literature review. Curricula including rotation should be modernized. With time, the above-mentioned components of the training can be amalgamated in a unified system. In conclusion, the medical postgraduate training in Russia must be prolonged, intensified and better organized

Previously we reported on the medical education and postgraduate training in Russian Federation (RF) [1]. There have been other comprehensive reviews [2,3]. This paper is an update. The attitude towards academic education has been complex since the early Soviet time. Many young people from different social strata strived for academic diplomas. The Soviet period brought about an expansion of admission numbers to universities and medical educational institutions; however, with insufficient regard for the quality of the preparation of its entering students. The task was to educate new, "proletarian" specialists [4]. Numerous new medical schools (called institutes) were founded. Medical faculties were extracted from universities; and the research was separated from the mainstream scientific thought [2]. The quality of teaching, especially of theoretic disciplines, deteriorated due to this separation. The accelerated training of "red doctors" resulted in augmentation of errors in diagnosis and treatment [5]. The social status and incomes of educated people and doctors' salaries had been decreasing in comparison with the rest of the population from the 1950s till the economical reforms of the 1990s, when the incomes diversified. Obviously, it was an aim and a consequence of the policy, whereas the tool was expansion of the educational offerings. This resulted in an overproduction of specialists, many of them passing examinations without much knowledge. Besides, there were privileged students



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Jargin SV*

Department of Pathology, People's Friendship University of Russia, Russian Federation

*Address for Correspondence:

Jargin SV, Department of Pathology, People's Friendship University of Russia, Moscow, Russia. Email Id: sjargin@mail.ru

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such as the Party and Komsomol activists (discussed below), who used their privileges to miss lectures whenever they wanted.

This paper attempts to delineate some aspects of medical education in RF during the last 5 decades. Apart from review of literature, it is based on observations by the author, who entered the I.M. Sechenov Medical Academy (named Institute at that time and recently renamed University) in 1973, later practiced at the same and other institutions in Moscow. Neglectful attitude towards academic knowledge was noticeable. For example, students were compulsorily sent during semesters to collective farms to harvest potatoes and other vegetables. At the Sechenov Medical Academy it usually happened during the 3rd year of education, so that many topics from pathology, surgery and internal medicine were lost. The agricultural works lasted up to 2 months, in 1984 even longer. In 1978, a construction brigade (stroyotriad) came back in October (the semester started on the 1st of September). Participation in construction brigades was accepted as a substitute for the nursing and medical practice in summer after the 3rd and 4th academic years. Some courses were omitted e.g., clinical pharmacology and gynaecological pathology (for future pathologists) during the 6th academic year 1982/83 despite figuring in the record book. It should be commented that the 6th year of the basic medical education, named subordinatura, is in fact an undergraduate training in one of three main directions (internal medicine, surgery, obstetrics/gynaecology) but possible also in pathology. Specialists in pathology, having completed a postgraduate training at the Sechenov Medical Academy (the leading institution, where most of the textbooks have been prepared) saw almost no gynaecological specimens because the Department of Obstetrics and Gynecology had its own pathomorphological laboratory. It should be also mentioned that during the whole basic medical education and postgraduate training in pathology, the child abuse and neglect was not mentioned; neither by paediatricians nor by forensic pathologists. Even today, doctors have no instructions how to act in case of suspected child abuse. According to some estimates, the prevalence of family violence in RF during last decades has been 45-70 times higher than, for example, in the United Kingdom and France; details and references are in [6].

A relatively low quality of the healthcare in RF was acknowledged by the Health Ministry [7]; a deterioration tendency was noticed in 2016 [8]. According to surveys, the population's satisfaction with the healthcare increased from 30% in 2006 to 40.4% in 2015 [7]. We have found no assessments for the present day; but optimism would be premature. Deficiencies of the medical education and postgraduate training negatively influence the healthcare quality [9], giving rise to the phenomenon known as *feldsherism*. Some students characterized it by the phrases like: "You will learn all you need at your future workplace". Attendance of lectures was stimulated by administrative measures, so that students came to the lectures to avoid trouble with the dean's office; but many of them neither listened nor wrote down anything, if even present at a lecture. For example, biochemistry was regarded by many students to be useless, while pharmacology was studied by some of them using textbooks for nursing schools. Admittedly, there were exceptions: in the Sechenov Medical Academy, professors' children were gathered in a few groups; the level of knowledge among them was comparatively high. Closer to the graduation, some students became diligent in learning of their chosen fields.

After the 6-year undergraduate medical education, to become a specialist in any field of medicine, a 2-year postgraduate program (*ordinatura*) without a preceding internship has been the usual way [2]. In 2016 the internship was abolished; so that the postgraduate training has on average become shorter and the quality decreased [9]. Less common is a 3-year program (*aspirantura*) that includes research for a candidate's thesis. There are two academic degrees in RF: Candidate of Sciences (often regarded to be analogous to Ph.D.) and Doctor of Sciences, more or less equivalent to the Higher Doctorate or the Habilitation in Austria and Germany. The minister of education (1999-2004) and head of the Higher Attestation Commission (2013-2024) Vladimir Filippov prescribed that the scientific degrees should be not translated but transliterated to foreign languages. In particular, "the designation of the academic degree Candidate of Sciences as Doctor of Philosophy or Ph.D. is unacceptable" [10].

Previously, certificates of medical specialists could be obtained after a 1-year internship. The insufficient duration of the training was pointed out in some publications, where it was stressed that young medical specialists should practice 2-3 years additionally at large centres under supervision of seniors before starting independent practice [11]. According to a survey published in 2010, 73.1% of the residents (*ordinators*) had entered the 2-year postgraduate program immediately after the basic medical education and 15 % - after an internship; the rest - after a period of practice [3]. The postgraduate students are on average not overworked; some of them come not every day and leave before noon, one of the reasons being part-time occupations discussed below. The postgraduate students on the 3-year program (*aspirantura*) are concentrated on their scientific work, which is often performed in a formal way. The rotation system is elaborated insufficiently; and many fields of theory and practice are left out. Admittedly, it is possible to achieve a good level of knowledge by self-education but gaps are hardly avoidable under the existing conditions.

The specialist certificates were introduced in the late 1990s. Before that, it was usual to become a medical specialist after a target

internship (1 year) or a course of primary specialization of several months' duration [12]. Doctors with that kind of postgraduate training have later obtained specialist certificates. Many of them are efficient and experienced physicians although lacking a comprehensive postgraduate training. As mentioned above, the 6th year of the basic medical education, named *subordinatura*, is in fact an undergraduate specialization. The curriculum of the 6th year contains several courses, but they are sometimes taught in a formal and superficial way; while the students' attention is concentrated on their chosen fields. The 6th year of the basic medical education (undergraduate, 1 year) plus internship (postgraduate, 1 year), was the widespread mode of the specialist training prior to the abolishment of internship in 2016. It was acknowledged that since the 1980s there have been no educational standards that meet international requirements for the training of medical personnel [13]. Comparisons with foreign countries were seldom, probably in accordance with the policy that "we must have our own ways". Some comparisons were published in Ukraine [14].

After completion of the postgraduate training, medical specialists must go every 5 years on a continuing education course up to one month long [2]. Some of such courses were rather formal and the attitude of trainees was sceptical [15]. Last time, many online courses have been developed; while their quality seems to be improving thanks to the availability of foreign literature on the Internet, advances of health information technology and telemedicine [16]. According to the Law #323-FZ and the Labor Code, the employer (medical institution) must pay for the continuing education required for further practice of a doctor. In the recent past, all phases of medical education were complicated by the limited access to the foreign literature and generally insufficient quality of domestic editions [17]. Many internationally used textbooks and manuals are unavailable now as before. This is one of the causes, why practices in RF have not kept up with the evolution of evidence-based medicine in more developed countries [18]. Insufficient theoretic knowledge caused, on one hand, excessive conservatism and, on the other hand, acceptance of non-evidence-based treatments [19]. Today, however, the easy excess to the international literature on the Internet facilitates the catching up with international standards.

Another topic that must be discussed in connection with the medical education is the scarce remuneration of postgraduate trainees. Au contraire, many *ordinators* and *aspirants* pay for the postgraduate education [13]. As a result, some of them combine their training with part-time occupations. According to a survey, 78.5% of *ordinators* (on the 2-year postgraduate program) and 78.8% of *aspirants* (on the 3-year program) combined their training with a part-time occupation, which in 1/3 of cases was non-medical. Moreover, 9.6% of *ordinators* and 6.4% of *aspirants* combined their education with jobs at pharmaceutical or intermediary firms [3], which may create conflicts of interest interfering with optimal practice.

Many former party, military and law enforcement functionaries, so-called *nomenklatura* [20,21], their relatives and protégées, occupy leading positions in academies and universities now as before. Being not accustomed to hard and meticulous work, some of them have been involved in scientific misconduct. As a result, under conditions of pressure to publish, numerous unreliable publications have

appeared; commented in [22,23]. By the end of the 1980s, this well-known phenomenon became conspicuous: the party activists and functionaries' children defended evidently fabricated dissertations, containing provable falsifications, manipulations with statistics and plagiarism [22,23]. Reportedly, plagiarism has been detected in Vladimir Putin's dissertation [24]. Contrary to the rules, this work is not available in libraries, so that we cannot check. Discussions of such reports at conferences transformed into public demonstrations of loyalty, because professionals understand the real value. A few colleagues dared to criticize; some of them were later dismissed [22,23]. Like generally with the nomenklatura, insufficient professional qualification did not hamper climbing the hierarchical ladder [25]. Most qualified doctors and lecturers remained on ordinary positions while functionaries became professors and university administrators, using, among others, honorary authorship: figuring as co-authors without actual participation [22,23]. Michael Voslensky rightly noticed that wherever the nomenklatura is found, much giving of orders (and corruption) can be found; but the real work is done by other people [20]. His words have become prophetic: the nomenklatura's "stubborn desire for world domination involves the grave danger of world war" [20].

The long time since the establishment of the Soviet state has not completely erased some stigmata of the worker-and-peasant origin of a large part of the ruling class [21,26]. In particular, certain first-generation military surgeons were responsible for the maintenance of invasive methods with questionable indications [22,27,28]. The training of medical personnel under the imperative of readiness for war has been one of the motives. Of note, the military and medical ethics are not the same. The comparatively short life expectancy in RF is a strategic advantage as it necessitates less healthcare investments and pensions. Some authors applied the term "fascism" in regard to the Russian healthcare [28,29]. Certain officials and media use the latter label relating to the Ukraine conflict as a largely senseless derogatory term [30,31]. There is no reason why it cannot be used to describe phenomena that are in disagreement with medical and common ethics, often having political motivations. Militarists and their relatives will become more dominant thanks to the Ukraine war. Those participating in it, factually or on paper, are obtaining the veteran status and privileges over fellow-citizens. Some of them will occupy leading positions at universities and academies without adequate preparation and selection. War veterans enjoy advantages in the healthcare and everyday life; there are, however, misgivings that the status has been awarded gratuitously to some individuals from the privileged milieu. At the same time, some relatives of superior officers evaded conscription under various pretexts [32]. In particular, many institutions of higher education grant exemption from the conscription. Admittedly, some functionaries and their children accumulated professional knowledge and experience. However, they contributed to the authoritative or autocratic management style and paternalistic attitude to patients including disregard for the principles of informed consent, professional autonomy and scientific polemics. In conditions of paternalism, misinformation, persuasion of patients and compulsory treatments are regarded to be permissible [33,34]. Suboptimal practices have been used as per instructions by healthcare authorities and leading professors' publications. Invasive procedures applied without evidence-based indications have been reviewed

elsewhere [22,27,28]. Ethical and legal basis of medical practice and research has not been sufficiently known and observed. The term "deontology" is often used for medical ethics in RF. Textbooks and monographs on deontology explained the matter somewhat vaguely, with truisms and generalities but not much practical guidance. In conditions of the authoritative management style, professionals often accepted working in any condition without making an effort to set things in order, keeping the interests of patients in mind. The ruling class, largely persisting from the Soviet time, thwarted adoption of some foreign experiences [25] including the Bologna Process in medical education. In conditions of legitimacy and high ethical standards, market economy stimulates a sound competition of constructive ideas, innovations and treatment quality. In conditions of disrespect for laws, regulations and ethics, the competition turns towards discrediting the free healthcare, manipulation towards paid services, and harassment of non-paying patients [35].

Conclusion

Shortages of medical education, limited availability of foreign professional literature and partial isolation from more developed parts of the world have contributed to persistence of outdated and suboptimal methods in everyday practice. Some domestic editions are scarcely, if at all, illustrated, contain outdated information, borrowings from foreign sources sometimes with mistranslations. More cooperation with the international scientific and professional community is needed. Without profound restructuring, the system of postgraduate training in RF can be adapted to the international standards if its options (2- and 3-year programs) would be transformed into consecutive steps. The total postgraduate training time would thus amount to 5 years, include preparation of a thesis and examinations to be awarded a degree equivalent to M.D. and a specialist certificate. Physicians not interested in research could prepare a thesis in a form of a literature review. Curricula including rotation should be modernized and adjusted to the corresponding fields of medicine. With time, the above-mentioned components of the training can be amalgamated in a unified system. In conclusion, the medical postgraduate training in Russia must be prolonged, intensified and better organized.

Conflicts of interest

The author has no conflicts of interest to declare.

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