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Topical issues concerning medical training: devoted the 140th anniversary of the birth N.A. Semashko

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The article addresses issues concerning the current development level of the health system and training of medical personnel. Their professional development illustrates the continuity of current trends with ideas suggested at the beginning of the 20th century. N.A. Semashko: improvement of practical training for medical and pharmaceutical workers, the development of professional standards and professional development of teaching staff. On the basis of the analytical material presented in the article, the authors attempt to make sense of the current situation and to identify priority areas of personnel policy for the health system of the Russian Federation.

Keywords: *personnel health policy, medical personnel, medical training, continuing professional development, adaptation, personal and professional qualities of the graduate*

The USSR's first people's commissar of health, Nikolai Semashko, considered the development of medical education to be one of the major challenges facing the nation's public health system. In his report to the First All-Russian Congress on Medical Education in 1920, Semashko stressed the need for a radical reorganization of the system of medical education and a reworking of programs and teaching methods. [1] Particular attention needed to be paid to identifying students' vocational aptitudes and abilities, the synthesis of labor and science, and major socio-scientific training of future doctors.

In works on the history of medicine, a number of prominent authors describe in detail Semashko's role in the development of medical education. [1-3] Semashko proposed rebuilding the methodology of medical education based on two most important areas: the link between teaching and life – everyday medical practice – and students' independence in the learning process.

Semashko pointed to excessive scholastic patronage, "the high specialization" of teaching in individual departments, as well as the fact that a doctor who graduated from medical school and learned well could still lose his or her way in an unusual situation. Students should be taught to think independently, to use creative interpretation of public-social issues in their practice. [4]

Semashko noted that the teaching faculty often failed to participate sufficiently in tutoring students. Many professors and teachers limited their communication with students to lectures and practical classes. [4]

Semashko's ideas concerning the development of national education and health care have not lost their relevance today.

At the Department of Public Health and Health Care at the I. M. Sechenov First Moscow State Medical University (one of the founders of which was Semashko), over the course of the last decade, a number of works have been produced on the training of medical personnel, the management of personnel at medical institutions and the problems of physicians' professional deformation during their practice.

The studies covered 1,368 physicians from medical institutions, including 162 heads of departments, 1,206 specialist doctors and 3,204 paramedical workers of the Central Federal Administrative District (Moscow and the Tula, Orel, Ryazan and Moscow regions), Siberian Federal Administrative District (Orenburg region), and the Southern Federal Administrative District. The studies showed that upon taking up their positions, only 77.8 percent of heads of departments, 81.8 percent of physicians, 89.9 percent of senior nurses, 80.7 percent of nurses, 71.4 percent of midwives and 88.2 percent of paramedics were ready to carry out their professional duties. Furthermore, 100 percent of department heads indicated the cause to be insufficient work experience, and 50.0 percent \pm 8.3 percent indicated a lack of necessary knowledge and skills.

Among the main reasons given for being unprepared for carrying out their official duties were a lack of practical experience in this position (100 percent), a lack of knowledge and skills in this position (27.8 percent), as well as ignorance of their duties (8.7 percent). Among the main reasons given for doctors being unprepared for carrying out their official duties were a lack of practical experience in this position (100 percent), a lack of knowledge and skills in this position (27.8 percent), as well as ignorance of their duties (8.7 percent).

During the training process, paramedical workers are prepared to carry out their professional duties, while the training of doctors at undergraduate level is more focused on the development of common analytical thinking. The number of paramedical workers who confirmed being prepared to perform their professional duties ranged from 71.48 percent of midwives to 88.2 percent for paramedics; 77.1 percent of nurses and 75.0 percent of midwives said they were not ready due to a lack of practical experience. At the same time, 11.2 percent of nurses and 25.0 percent of midwives said they lacked knowledge, skills and abilities. As for senior nurses, 10.1 percent were not ready to perform their duties, also mainly due to a lack of practical experience. All paramedics were ready to carry out their duties.

Speaking of adaptation, not only should professional aspects be taken into consideration,

but also the social side. Social (psychological) adaptation is understood to be the adjustment process, life in a professional team, and above all, getting used to the environment, which implies recognition of the environmental conditions and one's own impact on it. Criteria for the level of socio-psychological adaptation are the degree of job satisfaction, and relationships with colleagues and the administration. The adaptation process is completed when the employee's work successes are accompanied by good team relations.

According to our data, department heads experience problems related to psychological adaptation in 44.4 percent of cases, less than doctors (58.6 percent, *margin* <0.01), and more often with professional adaptation (77.8 percent and 45.2 percent respectively, *margin* <0.01). However, the problems of psychological adaptation for department heads are less important, as the team is well-known to them. Doctors are more likely than department heads to have problems with social adaptation (58.65 percent of cases, *margin* <0.01). Medical personnel have difficulties with professional and psychological adaptation in 11.7 percent of cases.

A different situation is observed in the case of paramedical workers: the number experiencing professional issues ranged from 65.5 percent of nurses to 68.8 percent of paramedics (*margin* >0.05) and 91.7 percent of midwives (*margin* <0.01). At the same time, psychological problems were more frequent among paramedics (37.5 percent) than midwives (25.0 percent, *margin* <0.1) and nurses (34.5 percent, *margin* >0.05), due to their specific work activities: paramedics in the health system are involved in children's clinics, emergency medical services in rural areas (rural outpatient clinics, medical and obstetric points).

The position of the senior nurse was a special category. Appointed from within their professional team, nurses in 46.4 percent of cases experience problems with social adaptation, and 63.7 percent (*margin* <0.01) with professional adaptation. In 9.1 percent of cases they had a combination of professional and social adaptation problems.

Among the challenges of adapting, 8.48 percent of physicians and 2.5 percent of nurses noted a lack of essential drugs in health

facilities and inadequate material and technical facilities.

Typically, people with little work experience in a given specialty, or in a given position, or with no work experience suffered problems with adaptation. Department heads who had no experience in a given position encountered adjustment problems in 41.4 percent of cases, but more often (in 51.3 percent of cases, *margin* <0,01) psychological problems arose in those who previously worked in this position, but with a different work group.

Among physicians, adaptation problems occurred more frequently in individuals who had no experience in the role or worked in another specialization (85.4 percent of cases), as well as in 12.0 percent cases where the person had one to five years of experience. However, out of the 14.6 percent who had work experience and had worked for more than five years, in 50 percent of cases adaptation problems were noted in the new workplace.

In the category of paramedical workers, adaptation problems were observed in those who had no experience: with 64.3 percent of nurses, 64.4 of paramedics and 88.9 percent of midwives. The adaptation problems were present even among those with more than five years of practical work experience in a position, but in a different department or institution – this was the case with 29.6 percent of nurses and 11.1 percent of midwives. A total of 64.1 percent of senior nurses without experience in a given position had problems with adaptation. Those who have changed jobs, but previously worked as a senior nurse, experience similar difficulties mainly in the first five years of work.

The results of the study point to a large number of health care workers' insufficient preparation to carry out practical work mainly due to lack of experience and skills, as well as lack of knowledge.

The continuing professional development of medical staff is especially urgent at present. According to our research, 38.4 percent of doctors and 61 percent of paramedical workers do not plan to raise their professional education levels. A total of 41.3 percent of physicians, including department heads, and 60.39 percent of paramedical workers did not plan to boost their professional growth in the future. The main reason

doctors mentioned was the lack of opportunity to occupy a higher position (55.6 percent), while 7.4 percent of physicians in their opinion have already achieved their designated professional level.

As concerned paramedical workers, the reasons varied depending on the position. Here, 88.0 percent of senior nurses believe that have already reached their designated professional level, 36.1 percent believe that their age does not allow for it and 18.5 percent do not see an opportunity to achieve a higher position within their institution. The last reason is also relevant for 52.4 percent of nurses, 37.8 percent of midwives and 88.9 of paramedics. Among other reasons, 14.2 percent of physicians reported a lack of prospects for the improvement of health care and their health.

Only 58.7 percent of those with higher education planned for further professional growth (59.1 percent of physicians and 55.6 percent of department heads), and 39.7 percent with mid-level health care education (45.5 percent of senior nurses, *margin* >0.05; midwives – 28.6±2,8 percent of cases, *margin* <0.01). Furthermore, 33.3 percent of physicians and 50.4 percent of paramedical workers planned for further professional growth only for personal reasons ("they envisioned it" but were not yet ready to tell anyone about it). In an oral interview with their bosses, only 19.7 percent of physicians and 22.0 percent of paramedical workers had spoke of their plans. Among paramedics, the figure was 14.8 percent, among nurses and senior nurses – 22.2 percent and 24.4 percent, respectively; no midwives were found with such intentions.

Those with officially approved professional development plans – drawn up, approved and signed by the head – included only 5.6 percent of physicians and 7.3 percent of nurses. Neither senior nurses nor midwives nor paramedics had such plans.

Among other types of professional development, planning department heads listed increasing their knowledge, skills and obtaining further qualification. Doctors also listed increased qualifications, improvement in their specialization, and postgraduate studies. Nurses and midwives listed refresher courses, studying medical literature and receiving qualifications. The frequency of such responses did not exceed 4 percent.

Age is a hindrance to future plans for 23.1 percent of paramedical workers; people older than 40 years fell into this category. Paramedical workers were two times more likely than physicians to consider that they had already achieved their designated professional level (18.6 percent and 9.7 percent, respectively). Senior nurses and senior midwives (88.0 percent) and midwives (62.2 percent) were more likely to list this reason than others, while among nurses, this reason was listed in only 9.9 percent of cases. This suggests that nurses do not perceive professional level and professional growth as the same thing. None of the paramedics listed this reason.

Medical training and the provision of medical facilities are initial steps for the formation of quality human resource development in health care, as was pointed out in the 1920-40s by Semashko. Work with the staff of medical institutions requires special attention, initially aiming for the formation of quality skills, and later their preservation and development.

The results of the study revealed significant problems with the subjective readiness of medical personnel to perform their professional role and identified the need for increased emphasis on the professional development of health workers, which should be directed into the development of their professional competence, an increase in motivation to improve high-quality work, the maintenance of a high professional level of personnel and with a view to further improvements in the development of health care, as well as to increase the competitiveness of health workers.

The advantages of planning and management of professional development for employees are a potentially higher degree of job satisfaction in the organization, a clear vision of personal professional prospects, the ability to plan other aspects of their lives, as well as targeted training for future professional activities and an increase of competitiveness in the labor market.

A medical organization then gains motivated and loyal employees who link their career with the organization, which increases productivity and reduces employee turnover; the ability to plan professional development for the staff and the entire organization taking into account personal interests; career development plans of individual employees as an important source to identify the

needs for vocational training; a group interested in professional growth, trained and motivated employees for promotion to key positions¹.

The development of national vocational education, including higher medical education, requires both the administration of universities, as well as the faculties of departments of pre- and post-graduate training, to implement these measures aimed at producing competent and competitive professionals capable of providing quality medical care in the marketplace, being able to constantly evolve, to improve the productivity and the quality of their personal labor and ensure the competitiveness of their organization.

In the current situation, not just vocational training but the formation of the educational process is a very urgent problem. If training is primarily focused on the current tasks at hand, then professional development should focus on potential health care needs and the needs of the professional in the future.

The decree of the government of the Russian Federation of April 15, 2014, № 294 "Approval for the state program of the Russian Federation 'Development of Health Care'" refined and changed the main provisions contained in the approved earlier orders of the government of the Russian Federation of December 24, 2012 № 2511-p. In general, according to previous documents and this regulation, the following areas are important in modern domestic public health:

- a reduction in the deficit of health personnel;
- a correction in the imbalance in the distribution of health workers in the three-tier system of care;
- the improvement of the practical training of health workers and pharmacists;
- the development and implementation of medical and pharmaceutical professionals' accreditation;

¹ This problem is clearly defined under the current conditions of Russia's medical education and health care development in Subprogram 7 of "Staffing of the Health System" of the Russian Federation Government Decree of April 15, 2014 № 294, "Approval for the state program of the Russian Federation 'Development of Health Care.'" As indicated in the document's explanatory note, this subprogram is critical for achieving the final results of the program as a whole by 2020. [5]

- the development of social support for medical and pharmaceutical workers;
- the development of professional standards, including common approaches to determine the level of skills and set of competencies for medical and pharmaceutical professionals;
- the professional development of teaching staff;
- the improvement of practical training, including the development of a network of simulation centers for training;
- the formation of scientific and educational clusters at leading universities;
- the formation of a creative generation of physicians, researchers and academics;
- the reconsideration of the ideology and approaches to staffing the health care industry with qualified personnel – the creation of an educational-staffing continuum;
- the development of infrastructure and clinical foundations for higher education;
- the transition from routine training to creative development of the intellect, preparation of professional management. Semashko himself insisted on the need for development of some of the above areas.

In accordance with Article 69 of the Federal Law "On the basis of health protection in the Russian Federation" № 323-FZ (2011), "the right to engage in medical activities in the Russian Federation shall be given to a person having received medical or other education in the Russian Federation in accordance with the federal government's educational standards and possessing a certificate of accreditation as a specialist." This provision will take effect from 01.01.2016. [6]

Accreditation will be required for both graduates of medical schools (to determine whether they can hold certain positions, having received the so-called primary professional clearance), and those who have graduated from clinical residency. Practitioners must also undergo system of evaluation for professional activity, confirm their professional clearance and receive a certificate of accreditation that can guarantee the quality of their care.

The quality formation stage for medical staff begins within the walls of the educational institution and requires careful attention to

the problems of the educational process at the department, providing students with information on job opportunities, obtaining feedback from students and improving the work of the teaching and organizational department of the university, and improving the work of the deans and relevant departments conducting career counseling of students throughout the entire period of their training.

Under these circumstances, it becomes extremely important to study the relationship of students to their studies, assess their readiness for future practice.

During the pilot study over the past three years we included 246 students from fifth- and sixth-year courses from the curative and preventive medicine faculties and 43 teachers who provided training for graduate students in the relevant departments of the I. M. Sechenov First Moscow State Medical University.²

According to the survey, about half of the students surveyed (45.9 percent) indicated that they had sufficient practical skills, but not for all the subjects studied. More than a third of students (37.8 percent) were not confident that they possessed sufficient practical skills and only one in 10 (13.8 percent) students were convinced that the opposite was true.

Analysis of the relationship of students to the study of theoretical materials in lectures has shown that they are interested in more informational lectures (57.7 percent), half of the respondents (50.0 percent) showed an interest in lectures concerning issues, 23.9 percent of students were interested in lectures that motivate them to study the subject and its practice.

Students combine study with work in 58.1 percent of cases surveyed. The reasons mentioned for combining work with study included receiving additional income (50.8 percent), gaining work experience and communication with colleagues and patients (26.8 percent), practical experience and skills (34.1 percent), the possibility of future employment (26.0 percent), and psychological adaptation with a team

² This was followed by an overview analysis without detailed characterization of the students' answers depending on the specialization area in which the training was being carried out, as well as the detailed composition of the faculty.

(25.2 percent) and to meet new people in a medical environment (16.7 percent).

Only 17.0 percent of the students surveyed considered themselves to be adequately prepared for work in practical conditions, 22.8 percent were completely unprepared, and 57.7 percent considered themselves prepared, but not completely. Thus, 80.5 percent of students, in their own opinion, were not ready for practical work. Among the reasons given were fear due to a lack of appropriate skills (47.1 percent of responses), lack of basic skills (34.1 percent), lack of knowledge (37.0 percent), difficulty in communicating with doctors and nurses (6.9 percent).

Students' responses indicate that they wish to develop their skills. As for future possible workplaces, 74.0 percent of respondents considered the possibility for professional growth important, 76.0 percent considered wages important, 56.1 percent indicated the need for a good team and psychological climate, and 60.21 percent listed the importance of the possibility for self-realization.

The study included a survey of both sides of the educational process (students and teachers), about the personal and professional qualities required of graduates. Responses of students and teachers differed. For students, optimism and self-confidence are considered to be among the most important personal qualities. Teachers listed these qualities significantly less often than graduates. For them, the most significant qualities were a high level of culture, the physical and mental health of the graduate and a feeling of goodwill towards people. Both students and the faculty members listed responsiveness and diligence as necessary personal qualities much less than other qualities.

There were also significant differences in the results of the survey of students and

teachers on professional aptitudes required of graduates. Respondents in both groups identified qualities such as reliability, work efficiency and communication skills. However, students were more likely than teachers to list the desire for change, innovation and leadership as important qualities in the modern world.

Thus, it is necessary to note the following points. Modern conditions for the development of national health care require the training of competent, competitive and responsible professionals seeking personal and professional development.

Analysis of the results of the sociological survey of working physicians, paramedical workers and graduates revealed the presence of problems in the professional and social integration of young professionals and indicated some level of medical personnel's unpreparedness for practical work at graduation.

Senior students, by indicating their lack of preparation for practical work, however, at the same time were characterized by a desire for professional growth and self-actualization. For them, necessary professional and personal qualities for a doctor include such professional qualities as the desire for change, innovation and leadership.

Differences in opinions of students and teachers indicate the need for attention to the continuing professional development of not only medical personnel, but also of those who carry out their training.

Particular attention must be paid to the rapidly growing informational, technological and personal divide between those studying and those teaching, as currently participants in the educational process are significantly estranged.

Thus, in the present conditions not only is universities' academic work extremely important, but also their educational work, as was pointed out Semashko.

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