

Л. І. Асламова*, Є. В. Куліч, Л. В. Шміглюк

Київський національний університет імені Тараса Шевченка, Київ, Україна

*Відповідальний автор: aslamova258@gmail.com

НЕОБХІДНІСТЬ ВПРОВАДЖЕННЯ СЕРТИФІКАЦІЇ МЕДИЧНИХ ФІЗИКІВ В УКРАЇНІ

Представлено спробу проаналізувати міжнародні стандарти та запропонувати рекомендації щодо впровадження сертифікації медичних фізиків в Україні, що, на думку авторів, буде суттєвим чинником, який впливатиме на стан здоров'я нації.

Ключові слова: медичний фізик, сертифікація, радіаційна безпека.

L. I. Aslamova*, Ie. V. Kulich, L.V. Shmyhliuk

Taras Shevchenko National University of Kyiv, Kyiv, Ukraine

*Corresponding author: aslamova258@gmail.com

THE NECESSITY OF IMPLEMENTATION OF MEDICAL PHYSICISTS' CERTIFICATION IN UKRAINE

Medical physics is a dynamic and constantly growing field of applied physics mainly directed towards the applications of physics principles to health care. Among the technological novations there is the optimization of image quality for magnetic resonance imaging, ultrasound diagnostics, and computer tomography; development and use of high energy linear accelerators with sophisticated options for dose delivery; computerized treatment planning systems, record and verification systems; overall integration of computers into the routine clinical work. The key role of the medical physicist is widely recognized to ensure the safe and effective use of modern equipment for medical exposure. Medical physicists are involved in four basic activities: clinical service, research, and development, teaching, and management/administration. In addition, they should be familiar with the safety culture and promote this principle among the medical staff for the improvement of radiation safety, setting an example by their behaviour. This is no the best practice for the certification of medical physicists in international experience. The paper presents an attempt to analyse international standards and propose recommendations for the implementation of medical physicist' certification in Ukraine. According to the authors, this will strongly influence on nation's health.

Keywords: medical physicist, certification, radiation protection.

REFERENCES

1. On the implementation of the Association Agreement between Ukraine, on the one part, and the European Union, the European Atomic Energy Community, and their Member States, on the other part. Resolution of the Cabinet of Ministers of Ukraine dated 25.10.2017 No. 1106. (Ukr)
2. Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards. General Safety Requirements Part 3 No. GSR Part 3 (Vienna, IAEA, 2014) 436 p.
3. European Basic Safety Standards: Council Directive 2013/59/Euratom laying down basic safety standards for protection against the dangers arising from exposure to ionizing radiation. European Commission, December 05, 2013.
4. *Roles and Responsibilities, and Education and Training Requirements for Clinically Qualified Medical Physicists.* Human Health Series No. 25 (Vienna, IAEA, 2016) 85 p.
5. On the statement of Licensing conditions of carrying out economic activity on medical practice. Resolution of the Cabinet of Ministers of Ukraine dated March 2, 2016, No. 285. (Ukr)
6. National Classifier of Ukraine. The classifier of professions DK 003:2010. Approved and entered into force by the Order of the State Committee of Ukraine for Technical Regulation and Consumer Policy dated 28.07.2010 No. 327. (Ukr)
7. On the certification of professionals with higher non-medical education who work in the health care system. Order of the Ministry of Health of 12.08.2009 No. 588. Registered with the Ministry of Justice of Ukraine on September 23, 2009, under No. 895/16911. (Ukr)
8. Law of Ukraine on the Use of Nuclear Energy and Radiation Safety of 08.02.1995 No. 39/95-BP. (Ukr)
9. On the statement of the General rules of radiation safety of ionizing radiation sources used in medicine. Order of the State Nuclear Regulatory Inspectorate of Ukraine and the Ministry of Health dated 16.02.2017 No. 51/151. Registered at the Ministry of Justice of Ukraine on May 18, 2017, at No. 636/30504. (Ukr)

10. On approval of requirements to the quality management system of carrying out diagnostic and therapeutic procedures with use of ionizing radiation sources. Order of the State Nuclear Regulatory Inspectorate of Ukraine dated 03.10.2008 No. 166. Registered with the Ministry of Justice of Ukraine on October 29, 2008, under No. 1054/15745. (Ukr)
11. *Safety Culture. Safety Series No. 75-INSAG-4* (Vienna, IAEA, 1991) 31 p.
12. L. Aslamova, Ie. Kulich, N. Melenevska. Safety Culture as a key issue of radiation safety in medical activities with ionizing radiation sources. *Radiation and Applications* 3(3) (2018) 159.
13. Yu.M. Skaletsky et al. Safety culture in domestic health care facilities. In: *Proc. of the Intern. Scientific-Practical Conf. "Patient safety in Ukraine: the state and ways to improve it"*, Dnipro, June 6 - 7, 2017 (Kyiv, 2017) P. 60. (Ukr)
14. Yu.M. Skaletsky, O.I. Nasvit. Some observations on the security culture development in Ukraine. In: *Proc. of the IX Intern. Conf. "Medical physics – the current state, problems, ways of development. Latest Technologies"*, Kyiv, Ukraine, September 23 - 25, 2020 (Kyiv, 2020) P. 108. (Ukr)
15. On approval of the General Requirements for the Management System of Activities in the Sphere of Nuclear Energy Use: Order of the State Nuclear Regulatory Inspectorate of Ukraine dated 19.12.2011 No. 190. Registered with the Ministry of Justice of Ukraine on January 10, 2012, under No. 17/20330. (Ukr)
16. On the introduction of the State Hygienic Standards "Radiation Safety Standards of Ukraine (RSSU-97)". Resolution of the Chief State Sanitary Doctor of Ukraine No. 62 of 01.12.97. (Ukr)
17. On the statement of the state sanitary rules "Basic sanitary rules of maintenance of radiation safety of Ukraine". Order of the Ministry of Health of Ukraine dated 02.02.2005 No. 54. Registered with the Ministry of Justice of Ukraine on May 20, 2005, under No. 552/10832. (Ukr)
18. International Radiation Protection Association Guidelines on Certification of a Radiation Protection Expert. Endorsed by the IRPA Executive Council (2016) 54 p.
19. L.I. Aslamova, Ie.V. Kulich, N.V. Melenevska. Introduction of the confirmation system of medical physicists' qualification in Ukraine. *Radiation Diagnostics, Radiation Therapy* 1-2 (2018) 101. (Ukr)
20. Educational and Research Center for Radiation Safety of the Taras Shevchenko National University of Kyiv. (Ukr)
21. All-Ukrainian Association of Medical Physicists and Engineers. (Ukr)
22. International Atomic Energy Agency. *Radiation Protection of Patients*.
23. International Atomic Energy Agency. *Information System on Occupational Exposure in Medicine, Industry and Research, ISEMIR-IC*.

Надійшла/Received 28.12.2020