

QUALITY MANAGEMENT OF MEDICAL IMAGING SERVICE IN THE REPUBLIC OF MOLDOVA

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Background and study aim: Continuous quality improvement and quality management play an important role in improving the quality of health care and controlling costs. During the last years, a quality assurance program has been developed by the Department of Radiology at the State University of Medicine and Pharmacy “Nicolae Testemițanu” aimed at improving the radiology and medical imaging services in the Republic of Moldova. At its initial stage, the program has been proposed for implementation in the tertiary medical institutions for preliminary assessment of its viability. The purpose of this study was to evaluate the results of the practical implementation of the quality assurance program for radiology and medical imaging services (*Manualul Calității*) in the tertiary medical institutions of the Republic of Moldova.

Materials and methods: The study evaluated the radiology and medical imaging services within the 9 tertiary referral medical centers. To allow a meaningful comparison of the obtained results between different institutions, only 4 most commonly used imaging modalities were included in this study: radiography, mammography, computed tomography (CT) and magnetic resonance imaging (MRI). The results have also been compared to the European or international reference standards or normative regulations when applicable.

Results: A total of over 300 000 imaging investigations per year were performed using the 4 imaging modalities included in the study. The results revealed an overall rate of recorded complications after invasive imaging procedures < 0.25% for all institutions, an average time of issuing the radiological report of less than 2 hours after completing the investigation (variations between 31 ± 10 min and 58 ± 17 min), a rate of radiological reports completed after 48 hours of less than 1% (variations between 0.21% and 0.7%), access to the requested investigations by CT, MRI or mammography within maximum 6 hours, access to the requested imaging investigations in emergency situations within 15 – 30 minutes with subsequent reporting of preliminary results within 10 – 20 minutes and completion of a formal radiological report within 30 – 60 minutes. The proportion of medical imaging equipment that has been acquired during the last 5 years varied between 50% - 100% in all institutions. A PACS system (picture archiving and communication system), however, was available only in 4 institutions and absent in 5 referral centers included in the study. Overall, the results are in concordance with those reported at the European and international level. Given the fact that PACS system offers the option of integrating medical services between different providers and medical institutions at the national and international level, installation of a PACS system represents a priority for those 5 tertiary medical centers that currently do not have it.

Conclusion. The quality assurance program aimed at improving the quality of radiology and medical imaging services in the Republic of Moldova has proved its viability following its practical implementation in the tertiary medical institutions. The results have also allowed developing a set of legislations for implementation at the national level (*Legislation No 451 of the Government of the Republic of Moldova from 24.07.2015 related to radiology services and radioprotection*).