

The Impact of Leadership on Nuclear Security Culture: Qualitative Approach to the First Polish Self-Assessment at a Medical Institution Using Radioactive Sources*

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Abstract

This study was motivated by the growing global emphasis on enhancing nuclear security culture, particularly in non-nuclear sectors such as healthcare institutions that use radioactive sources. As leadership is acknowledged as a pivotal element in the development and maintenance of a security culture, the objective of the project was to examine how leadership engagement can be executed through systematic self-assessment procedures. A notable gap in the existing literature is the lack of empirical evidence on nuclear security culture self-assessment in medical institutions, especially with respect to leadership's role. Although theoretical models do exist, there is a shortage of documented practical implementations, particularly in Central and Eastern Europe. The methodology followed IAEA guidelines (NSS No. 7, NSS No. 28-T, NSS No. 43-T) and included the development and implementation of a tailored self-assessment questionnaire. The project involved staff members from a Polish oncology facility operated by a private healthcare provider. The participants represented several professional groups, including doctors, medical physicists, and radiological technicians. The findings of this study demonstrate that the presence of leaders who are both visible and engaged has a significant influence on the maturity of the security culture within the organization. The leaders played a pivotal role in the initiation of self-assessment, the promotion of awareness, the facilitation of training, and the sustenance of policy adherence. The findings substantiate the notion that leadership functions not only as a cultural catalyst but also as a structural facilitator of ongoing enhancement. The paper's conclusions offer a series of recommendations with a focus on leadership, the objective of which is to more firmly establish a culture of nuclear security within organizational practices. This initiative is designed to serve as a replicable model for similar institutions around the world.

Keywords: leadership, nuclear security culture, self-assessment