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POSTER SECTIONS

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Implementing Dose Management Systems in Radiology Departments: Pros and Cons

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Learning objectives

The increasing use of radiodiagnostic modalities has led to an increased focus and awareness on patient safety and consequent search for optimization of radiographer's practices 1. The Basic Safety and Standards Directive (BSSD), 2013/59/Euratom lays down standards for protection against the dangers arising from exposure to ionizing radiation2. This Directive was adopted by the Council of the European Union in 2013 and there was a requirement for transposition and implementation into national legislation in EU member state by February 2018. One of the key points...

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Background

The BSSD requirement to continuously monitor and control patient dose exposure data is a challenge to RD since it is a time-consuming and complex process given the limited resources, the need of manual entry of values, the extensive statistics and long hours data analysis required.5,6. However, the introduction, in past few years, of automatic dose management softwares has greatly facilitated the process of compiling, monitoring, and recording exposure data. To overcome this problem DMS were developed as a very helpful tool for monitoring patient exposure,...

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Findings and procedure details

The results point to a prevalence of positive aspects, rather than disadvantages of implementing DMS. Some of the strengths highlighted include: 1,5,6,7,8,9,10,11 Rapid collection and reliable management of CT dose data Single database Assessment of a whole sample and not only a limited number of patients Easy and quick statistical overview of all clinical and technical data Collection of dosimetric data to establish local and/or national DRLs Checking compliance with established DRLs Detection, identification and alert generation of high dose levels or overexposures Optimization of...

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Conclusion

Automated and systematic dose monitoring is crucial in quality management in a RD, especially due to the BSSD mandatory requirements. The implementation of a DMS is an expensive and limited access investment, although it presents many benefits and satisfactory results regarding imaging examination's practice optimization, continuous quality improvement and patient safety. DMS are proven to be a powerful and effective tool and its implementation can contribute to a greater awareness among radiographers in issues related to ionizing radiation dose exposure and, thus, encourage the optimization...

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Personal information and conflict of interest

B. Vicente: Nothing to disclose R. P. P. Almeida: Nothing to disclose A. F. C. L. Abrantes: Nothing to disclose C. da Silva: Nothing to disclose

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References

Fitousi, N. (2017). Patient dose monitoring systems: A new way of managing patient dose and quality in the radiology department. Physica Medica, 44, 212–221. https://doi.org/10.1016/j.ejmp.2017.06.013 European Parliament. (2014). Council Directive 2013/59/Euratom of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation, and repealing Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom a. Off J Eur Commun L13, (December 2003), 1–73. European Society of Radiology. (2015). Summary of the European Directive 2013/59/Euratom: essentials for health professionals in radiology. Insights...

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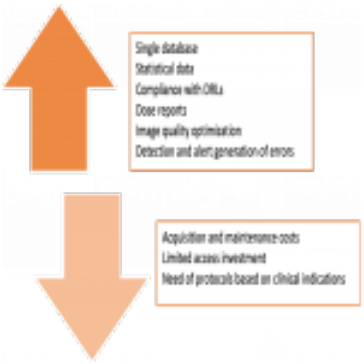

Fig 1: *Figure 1- Pros and cons of implementing a Dose Management System in Radiology...*