

# Modern and Efficient Management in the Nuclear Medicine Department: the Lean Approach

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**Objectives:** There is a worldwide concern in the healthcare systems for increased efficiency. Efficient management tools are thus required to deal with the increased complexity and quality-driven processes characteristics of healthcare. One of them is "Lean Management", known for adding value to a variety of industries. The opportunity for starting a new Nuclear Medicine and Molecular Imaging Department was assumed as the ideal moment to adopt Lean methods and embed them in the internal Quality Management System. Since both systems are focused on the same target - the customer/patient - it just looked a natural "step further". The Lean approach has been defined as a "quality improvement method that focuses on maximizing activities that are valued by the customer and eliminating waste that hinders efficiency in the workplace". **Methods:** We started by giving staff basic training on Lean methods and philosophy. Then, we went through the eight classical steps process for Lean implementation: 1) all staff levels were equally involved. 2) Going to the "gemba": careful observation and analysis of processes where they occur. 3) Elimination of all forms of waste (including steps that do not add value in a process). 4) Standardization of Practices: Standard Operating Procedures (SOPs) were written for every procedure (from patient reception to clinical reports release). 5) Flow improvement of all processes. 6) Use of visual cues for communication; 7) Add value to the customer; 8) Application of Lean tools for data collection and analysis, improving processes and sustaining change. Detailed practical specific examples of all and each of these steps will be given in detail.

**Results:** We analyzed the seven categories of waste and implemented measures to minimize them by, for instance, optimizing the agenda (careful booking and patient

instruction and follow-up about previous preparation for scans), better control of the stock to avoid expired drugs and supplies, placing the required supplies in each room at the right time and amount. Moreover, through the implantation of the "5S Tool", we ended up by having a better organized and cleaner workplace, where there is "a place for everything, everything in its place".

Conclusion: Lean Management is not an end by itself: it is a continuous improvement process that seeks continuously improvement. What distinguishes Lean Management from the conventional management systems is the involvement of every single collaborator, who in this way is empowered to identify problems, propose and implement solutions, creating an overall culture for change (the kaizen principle).