Anticipate the drifts and be able to assess when deviations are large enough to require adjustments

Such a process will combine “on line” and “off line” procedures (figure 1) giving opportunities to detect and alert for isolated gross errors, systematic deviations and/or small variations with time. Beyond individual patients follow up, such databases will bring new perspectives if properly designed for automated analysis. Statistical analysis of data per energy, machine, technique, before and after a change in the delivery process (upgrade, new device, etc...) will become possible and help in decision making. Moreover, the frequency and variability in the controlled configurations will go far beyond any well-designed quality control program which could lead to reconsideration of strategies in that domain.

Optimising workflow using a workflow management system

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It is well known that a concerted effort from an entire radiotherapy (RT) team is needed in order to provide accurate, precise, and effective radiotherapy treatments to patients. And in this process, each member of the RT must perform specific tasks in order to achieve the best possible care for the patient. Throughout the pre-treatment and treatment process, communication and knowledge sharing between the different team members is of paramount importance. Any disruption in the workflow can result in treatment delays and errors and costly repetition of work. In an era where organisations and department are aiming for continuous quality improvement and increased efficiency, optimal workflow management is of uttermost importance.

With the advent of lean management and quality improvement approaches, various types of workflow management softwares are currently being offered or developed in house to improve the radiotherapy departments’ workflow. Their overall aim is to facilitate intra and interdisciplinary communication between the RT team members in order to optimise the department’s patient flow and safety (1). Nevertheless, to successfully implement these systems, it is important to properly define the department’s workflow and processes. These systems also need to be flexible enough to integrate workflow modifications and evolutions resulting from improvement actions or process changes (i.e. new treatment modality/new technique/…), interconnectivity, compatibility with other systems in RT departments, user friendliness and ease of access are also features that should characterize these systems.

In the past few years, numerous departments have thus equipped their departments with these workflow management systems. These have proven to be a real asset in the RT departments and their arrival have already ameliorated numerous aspects of patient workflow through standardization of workflow, integration of checklists and forcing functions and task attribution tools. Their use have also allowed for departments to quantitatively monitor their workflow and put into place procedures/modalities to increase the efficiency and safety of their workflow. However, many of the company-based systems are costly and do not allow for the overall visualisation of the status of different patients within the RT workflow at a given time. As a result, certain departments have developed their own workflow management system. One such system is “ITP Process” (iTP) which is an internally developed open source software (2). This system provides the user with the quick visualisation of all patients in the pre-treatment and treatment sub processes (Fig. 1).

Symposium: Management and optimisation of the daily workflow

SP-0600

Optimising workflow using a workflow management system

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Fig. 1. iTP Process

And in a user-friendly environment, allows for the user - RO, MP and/or RTT to quickly visualize the tasks that need to be completed. Through the completion of dedicated and integrated checklists per subprocess, safe and efficient patient workflow is ensured. Furthermore, ease of access to procedures, staff availabilities and breakdown statistics and information are also valuable tools that can be integrated within workflow management systems.

In conclusion, workflow management systems are fundamental tools for the improvement of quality and safety of patient workflow. These need to be personalized to the department’s workflow and user centered. As such, in addition to company developed systems, in house or open source software can provide an ideal solution for radiotherapy department desiring to improve patient workflow in a safe environment.


SP-0601

Does lean management improve patient safety culture?

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Introduction: In the field of radiotherapy the importance of a safety culture to maximize safety is no longer questioned. However, how to achieve sustainable culture improvements is less evident. A multifaceted approach is preferred to improve the safety culture, where multiple safety interventions are combined. Lean management is such an integral approach which aims to improve safety, quality and efficiency. Therefore, lean is expected to improve the safety culture. MAASTRO clinic combined lean initiatives with structural and cultural elements to promote continuous improvement. They reorganized from managing the different professions to managing multidisciplinary care pathways in January 2011. Executive management discussed the organizations’ strategy with all employees to create a shared vision. In 2013, many professionals were engaged in multiple lean projects to improve the entire (flow of the) patient process. The treatment planning system and the accelerators were replaced by new technology from 2011 to 2012. The patient safety culture was measured to evaluate the effects of this multifaceted approach.

Methods: The patient safety culture was evaluated over a three year period using a triangulation of methodologies. The Manchester Patient Safety Framework, implemented as a workshop, was combined with two surveys to evaluate the safety culture /behavior. Incident reports from an incident reporting system (IRS) and interviews with professionals were used to increase understanding of results. The workshops were performed twice. We used the internationally validated Hospital Survey on Patient Safety Culture (HSOPSC), which