Introduction

Many believe that a paperless environment leads to enhanced efficiency within medical environment. Unfortunately, Record and verify (R&V) systems may not be flexible enough to provide openness which was available in a paper environment and additional steps are needed to ensure equivalent quality of patient care. Presently Mosaiq, a popular R&V system, supports only Microsoft word document as the standard document type which doesn’t support conditional formatting, various formulas etc. However, word does support an embedded Excel object which is powerful enough to handle these requirements.

Methods

A number of quality checklist templates specific to nature of the check viz. initial physics (photon/electron) chart/plan check, total body irradiation check, therapist pretreatment check, final physics check etc. have been developed in Excel utilizing simple check box items, numerical and logical formulas and the automatic status change [red=unchecked/out of specification item, green=checked/in specification item, orange=caution etc.], helping to easily identify the problem.

Results

The initial physics (photon/electron) chart/plan check template provides a recipe for checking of all parameters which affect the patient’s treatment in terms of verification of MDs script, treatment plan and R&V system parameters. Also included are the necessary parameters to ensure beam direction & evaluation of treatment plan based on standard dosimetric indices. The TBI quality check-list provides an independent verification of all the physics related parameters [e.g. MUs, dose to various OARs, computation of the lead-sheets to increase the patient’s mid-plane dose uniformity, given dose and appropriate correction due to lung transmission etc.]. Color coded check list items are available to verify the necessary R&V parameters. Computed parameters were within ±0.5% of that of the primary computation.

Conclusion

Integration of these templates in our R&V system provides a framework for consistent verification of patient's treatment parameters including treatment plan evaluation prior to initiation of treatment.

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