

Transitioning to Electronic Charting for LDR Prostate Brachytherapy

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INTRODUCTION

Radiotherapy clinics are increasingly transitioning towards a paperless environment to improve electronic access to patient records, improve documentation, workflow efficiency, decrease physical-chart storage space, and reduce the risk of missing charts whenever patient data are needed. However, such transition to electronic charting related to LDR Prostate Brachytherapy (LDR-PB) is much more difficult due to extensive regulatory requirements that electronic health record systems are not currently well adapted to manage.

AIM

The specific aim for this project is to define the process for transitioning from paper-chart to electronic charting process (LDR-PB).

To develop a seamless and improved electronic documentation workflow for LDR-PB.

METHOD

Process Map and Regulatory Approval – The detailed process map, which depicted the existing process that included the involved steps from patient consultation to medical event evaluation was plotted. Each major step in process map was broken down into several sub-steps which identified the activities performed by appropriate team member groups. Prior to transition, approval was obtained from the VA's National Health Physics Program for use of electronic signatures with LDR-PB documentation.

Teams - Weekly discussions were held among the group members to discuss the changes required at each sub-step for transitioning to electronic charting. The process changes were highlighted for each step in the process map (shown in results)

Documentation - A well-organized documentation system consisting of checklists, timely user-oriented reminders and documentation scripts was developed to create a seamless electronic workflow. Various functionalities of the electronic medical record (ARIA™) such as Care Paths, Patient Encounters, Questionnaires, and Dynamic documents were used to streamline and standardize the workflow in our clinic.

Interface - Interfaces were built for the VA's Computerized Patient Record System and ARIA to seamlessly communicate the patient encounter and clinical documents. An implementation assessment was completed after the first 15 cases to identify the differences between the two workflows.

RESULTS

Eleven electronic document templates were created for the whole process, out of which fields in five document templates get pre-populated with relevant data from patient's chart such as diagnosis codes, simulation and special physics form fields, leading to improved workflow efficiency of the staff involved. Electronic charting has reduced the transcription error rate, and the clinical documentation time has been reduced by 23.3% (The documentation time is calculated from an internal bookkeeping resource, where we track of start-to finish documentation schedule).

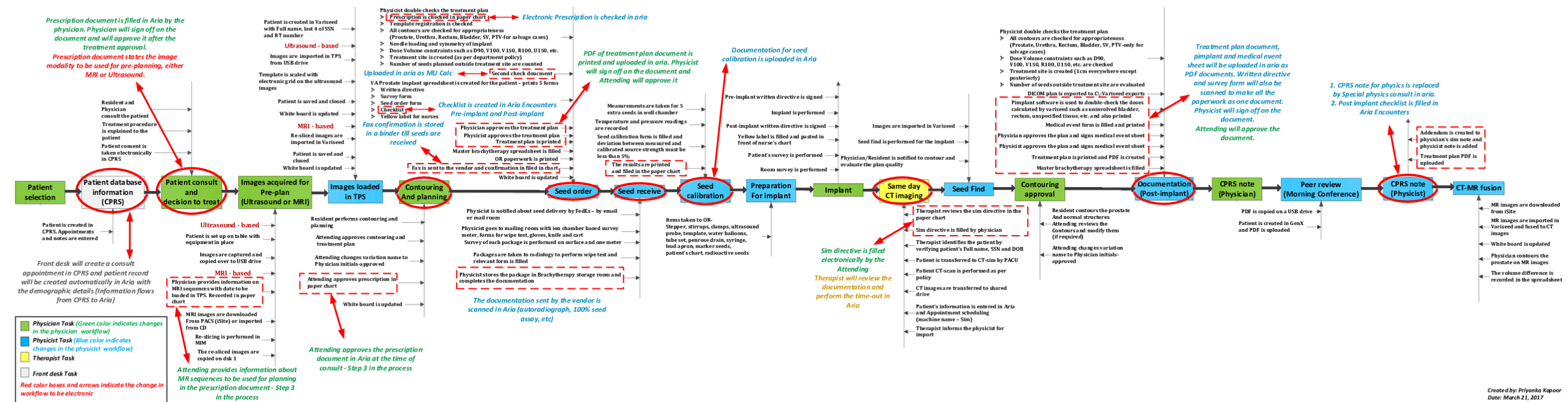


Figure: Process map for LDR prostate brachytherapy workflow in our clinic.

The entire LDR-PB workflow is divided into several steps and each step is further broken down into sub-steps. The steps are color coded to show the tasks performed by physicist, physician, therapist and front desk staff (scheduling appointments for patients).

The process change is highlighted by red color for each step and sub-step in the process map shown below.

CONCLUSIONS

Key attributes for successful implementation of electronic-charting were the creation of the process maps and involvement of team member groups. The staff involved in the process embraced the changes in workflow with training, teamwork and commitment.

Brachytherapy processes are much more stringent in terms of regulatory requirements, which makes it hard for clinics to have a chartless process for LDR-PB. Weekly discussions and communication among team members helped us make this challenging transition towards a paperless environment for LDR prostate brachytherapy charting smooth and successful.

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