Workflow and the Electronic Chart

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Workflow Example

1. Simulation Request
2. Simulation
3. Volumes and/or Fields Approval
4. Tx Planning
5. Tx Plan Approval
6. Physicist Plan Check
7. Verification Sim
8. Physician Approval of Image
9. IMRT QA
10. Treatment
11. Ongoing Tx QA
12. End of Tx Physics Check
13. Miscellaneous Items: MD Tx Summary, Follow-up Schedule
Workflow in RO-EMR

- **Record keeping**
  - Approved simulation request form
  - Physicist plan check form
  - Portal images

- **Task tracker**
  - Tx plan approved, pending next task physicist plan check

- **Safety catch**
  - Treatment prevented without approved prescription
Workflow Question 1

• Overall, how satisfied is your practice with the utility of the RO-EMR environment in management of your clinical workflow?

- 25% Very satisfied
- 50% Satisfied
- 17% Neutral
- 3% Dissatisfied
- 4% Very dissatisfied
- 1% Our RO-EMR does not manage clinical workflow
Workflow Question 1

- Factors that seem to contribute to higher workflow management satisfaction:
  - More variety of groups included in the committee.
  - Total number of committee member.
  - Time spent more in software selection, training, and hybrid chart usage length of less or equal to 6 months.
Workflow Question 2

• Which of the following safety barriers prevent proceeding with the simulation without completion of MD’s simulation order? Choose the first answer that applies.
Workflow Question 3

• Which of the following safety barriers in your RO-EMR prevent proceeding with the treatment without final approval by physics? Choose the first answer that applies.

- a. Software interlock. (forcing function)
- b. Time out procedure or checklist.
- c. Written policy.
- d. There is no barrier.
Importance of Physicist Plan Check

- Physics chart review
- Physics weekly chart check
- Therapist chart review
- Checklist
- EPID dosimetry
- Physician chart review
- Port films: check by therapist
- Port films: check by physician
- SSD check
- Online CT: check by therapist
- Timeout by the therapist
- In vivo diode measurements
- Online CT: check by physician
- Chart rounds
- Pre-treatment IMRT QA

Effectiveness (%)

Workflow Question 4

• How often do you experience failures of communication/transferring of treatment history from your delivery systems back to the e-chart system?

- a. Always (daily occurrences)
- b. Usually (several times a week)
- c. Sometimes (once every week)
- d. Rarely (once every couple weeks)
- e. Never
- f. My RO-EMR does not communicate with the delivery system
Workflow Question 5

- Have you had **near-misses or deviations** because of failures of communication/transferring of treatment history back to the e-chart system?

- a. Yes
- b. No
- c. Unknown

- 66% of respondents answered a. Yes.
- 20% answered b. No.
- 14% answered c. Unknown.
Workflow Question 6

• Do you explicitly schedule and/or manage the following parts of your workflow using the RO-EMR (i.e. via MOSAIQ QCL, ARIA care path, etc)?

- Write diagnosis: 41.8% Yes, 58.2% No
- Enter prescription: 25.9% Yes, 74.1% No
- Treatment plan: 9.9% Yes, 90.1% No
- IMRT QA measurement: 6.3% Yes, 93.7% No
- IMRT QA review: 12.6% Yes, 87.4% No
- Initial physics chart QA: 24.9% Yes, 75.1% No
- Weekly physics chart QA: 30.5% Yes, 69.5% No
- Initial RTT chart QA: 14.8% Yes, 85.2% No
- Weekly RTT chart QA: 21.9% Yes, 78.1% No
- End of treatment physics chart QA: 47.1% Yes, 52.9% No
- End of treatment RTT chart QA: 38.7% Yes, 61.3% No
Workflow Question 6

- Do you explicitly schedule and/or manage the following parts of your workflow using the RO-EMR (i.e. via MOSAIQ QCL, ARIA care path, etc)?

![Graph showing the percentages of various workflow parts managed using RO-EMR. The graph includes categories such as Write diagnosis, Enter prescription, Treatment plan, IMRT QA measurement, IMRT QA review, Weekly physics chart QA, Initial RTT chart QA, Weekly RTT chart QA, and End of treatment RTT chart QA. The percentages range from 0% to 100% for each category, with some categories showing higher percentages than others.]
Workflow Question 7

• How well is the communication within the RO-EMR functioning in the contexts given below?
Workflow Question 7

- Physician to Treatment Planning
- Physician to Treatment Machine
- Alert for protocol patient
- Alert for changes in prescription
- Notification of incomplete tasks
- Notification of incomplete checklists
- Notification of change in treatment

- External Survey Average
- Internal Survey Average

- Excellent
- Above Average
- Average
- Below Average
- Poor