Memorial Sloan Kettering Cancer Center

# Information Storage in the Electronic Chart

J Mechalakos- MSKCC (TG262 chair) S Sutlief- Cancer Treatment Centers of America Landauer Medical Physics (TG262)

#### **Synopsis**

- Introduction
- Review of TG262 external survey questions about information storage in the electronic chart
  - Storage formats for some standard chart elements
  - Utilization of free text notes by clinical staff
  - Documentation of physics checks

Information

folder

 Type of approvals and how commonly they are used

> Memorial Sloan Kettering Cancer Center

#### Information

• Then

paper

- Now
  - Dual screen
  - On txt note
  - Dynamic DocumentJournal entry
  - Alert
  - Questionnaire
  - Checklist
  - Embedded prescription
  - Encounter
  - QCL note
  - ...

#### Types of chart elements and how they are stored

#### Common Chart Elements\*\*

	Pre Treatment- Simulation	Planning	On Treatment	Post- Treatment
MD/Nursing	-Consents -Initial Consultation (Radiation Oncology) -Simulation order -Simulation note -Pathology reports -Radiology reports -Pathony puestionnaires	-Prescription/written directive -Special orders (not an Ro)- imaging_treatment goals, etc.	-chart rounds checklists -MD status check -Nursing status check	-MD Treatment Summary -Pollowupvisits
Physics/ Radiation Therapy	-Birnulation checklass and QA forms - Simulation documentation [CF- PET-M80] -Seed invectory and calibration	- Transmer Hiss - Manual HW calculation forms for non-planned cases - Textment planning timeout - Histain Chart check form - Histain Chart check form - Histain Chart Check dosimetry Tomis - Recard of previous - Recard of previous tomorrow to - Histain Chart Check - HITTimital chart check ehedlint	Has Alphanage in catanete delawar developilange specific and noom aperities and the second second second second second approximation and the second second second delay for second second second second second delay for second second second second indication, respiratory poling, etc) 4.05 or report indication, respiratory poling, etc) 4.05 or report indication, respiratory poling, etc) 4.05 or report 1.04 or re	-Post implant evaluation -End of treatment check -RTT end of treatment check
PhD, Tim			ogy, edited by Adam P. D d, PhD (Volume Editors),	

Electronic formats

Not stored in RO-EMR
Scanned or imported
Form or template
Free text note

Memorial Sloan Kettering Cancer Center

#### **Context is important**

#### · Example- checklists:

#### Advantages

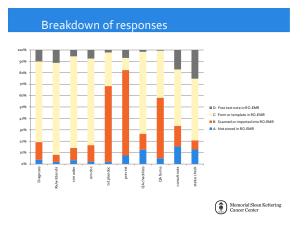
- Possibility of electronic interlocks such that treatment cannot proceed without completion of the checklist
- · Potential to perform quick audits of checklist conformance
- Disadvantages of poor implementation
  - · Electronic documents can be challenging in some EMRs
  - They can tie a user to a computer terminal- this is important to be aware of for time critical procedures

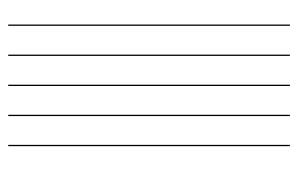
Fong de los Santos et al, MPPG 4a. Development, implementation, us and maintenance of safety checklists, JACMP vol 16(3) 2015

#### SURVEY QUESTION

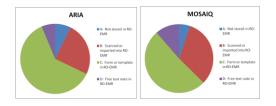
How are the common elements of a radiation oncology paper chart stored in the RO-EMR? Choose one of the following methods:

- · A: Not stored in RO-EMR
- · B: Scanned or imported into RO-EMR
- · C: Form or template in RO-EMR
- D: Free text note in RO-EMR

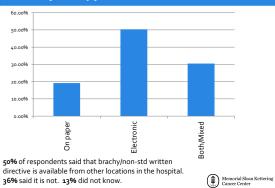




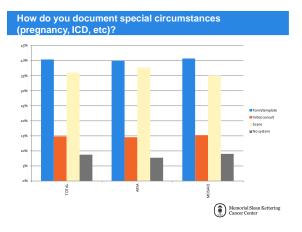
# ARIA vs MOSAIQ



Memorial Sloan Kettering Cancer Center



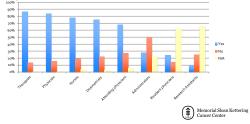
# Brachytherapy/non-std written directive





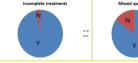
#### SURVEY QUESTION

Please specify whether each group listed below uses free text notes in your RO-EMR (ARIA journal, MOSAIQ On-Tx notes, etc) Yes or <u>No</u>



#### SURVEY QUESTION

Do you use the RO-EMR to document incomplete treatments, missed appointments, or machine failures? Yes or No





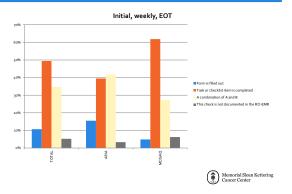
ARIA, MOSAIQ comparable Check for saveback errors!

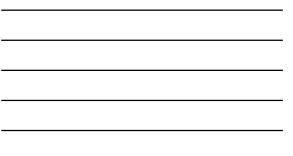
ARIA, MOSAIQ comparable

Preakdown for machine failures:

failures: ARIA=51% MOSAIQ=74%

#### **Documentation of physics checks**



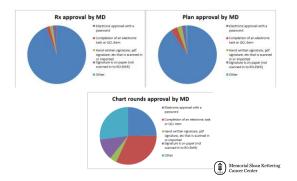


#### SURVEY QUESTION

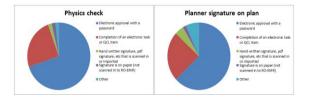
- Please indicate how your "signatures" are documented for each document type.
  - A. Electronic approval with a password
  - B. Completion of an electronic task or QCL item
  - C. Hand written signature, pdf signature, etc that is scanned in or imported
  - D. Signature is on paper (not scanned in to RO-EMR)
  - E. Other

Memorial Sloan Kettering Cancer Center

### MD signatures - Rx, plan, chart rounds



#### **Physics signatures**



Memorial Sloan Kettering Cancer Center

#### Summary

- Context is important when determining how to store different types of information most effectively.
- Most users utilize forms or templates for most standard chart elements
  The brachytherapy/non-standard treatment device directive was not as
- electronically integrated as external beam.
- Use of free text notes predictably parallels usage of ad hoc notes to the treatment record in the paper chart
- Incomplete treatments, missed appointments and machine failures and documented in the RO-EMR more often than not.
- Physics checks are most commonly documented as tasks alone however many have accompanying forms
- Approvals are most commonly applied via electronic authentication though tasks are also common for certain elements.

Memorial Sloan Kettering Cancer Center

## Thank you!

# **Acknowledgments**

•Members of TG262 •Michael Woodward and AAPM for hosting the survey •Survey participants