Using Event Reporting to Improve Patient Safety

Barriers and Buy-in

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Disclosures…

- I was part of the ROILS Data Elements working group & PSO steering committee
  - ROILS- contract based, free system
- I am vice chair of the Multidisciplinary Quality Assurance Subcommittee

SAM QUESTION

- Your department can only use RO-ILS if:
- a. Everyone in your department signs a waiver to participate
- b. Your department leadership says it is ok
- c. Your institution has reviewed the contract and signed the participation agreement
- d. You sign the agreement and pay an annual fee of $1000

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- https://www.astro.org/Clinical-Practice/Patient-Safety/ROILS/Index.aspx. Accessed 2/1/2015.

What I've learned as a Rad Onc who goes to more than the average number of physics meetings for an RO….

- Most physicians do not inherently see the value in an incident learning system.
- I often get ambushed about why rad oncs aren't on board.
- "Those convinced against their will are of the same opinion still."

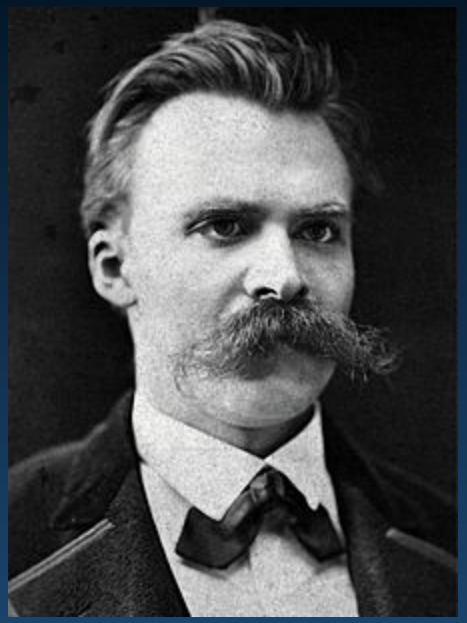
- But…let's meet some of the nay-sayers, shall we???

The Blacklist

- The Nihilist
- The Conspiracy Theorist
- The Efficiency Guru
- The Pragmatist
- The Under-Miner
- The Cleavers
- The Conformist

The Nihilist

- Gut reaction
  Comment: “Do these things make a difference?”



Survey of Radiation Therapists (n=600)[1] (Courtesy Larry Marks)

	Bad	Neutral	Good	Very Good
My communication with my:				
radiation oncologists is…	8%	11%	27%	54%
physicists is	6%	6%	23%	65%
departmental administrators is…	19%	13%	30%	38%
My comfort level reporting errors is…	10%	8%	16%	66%

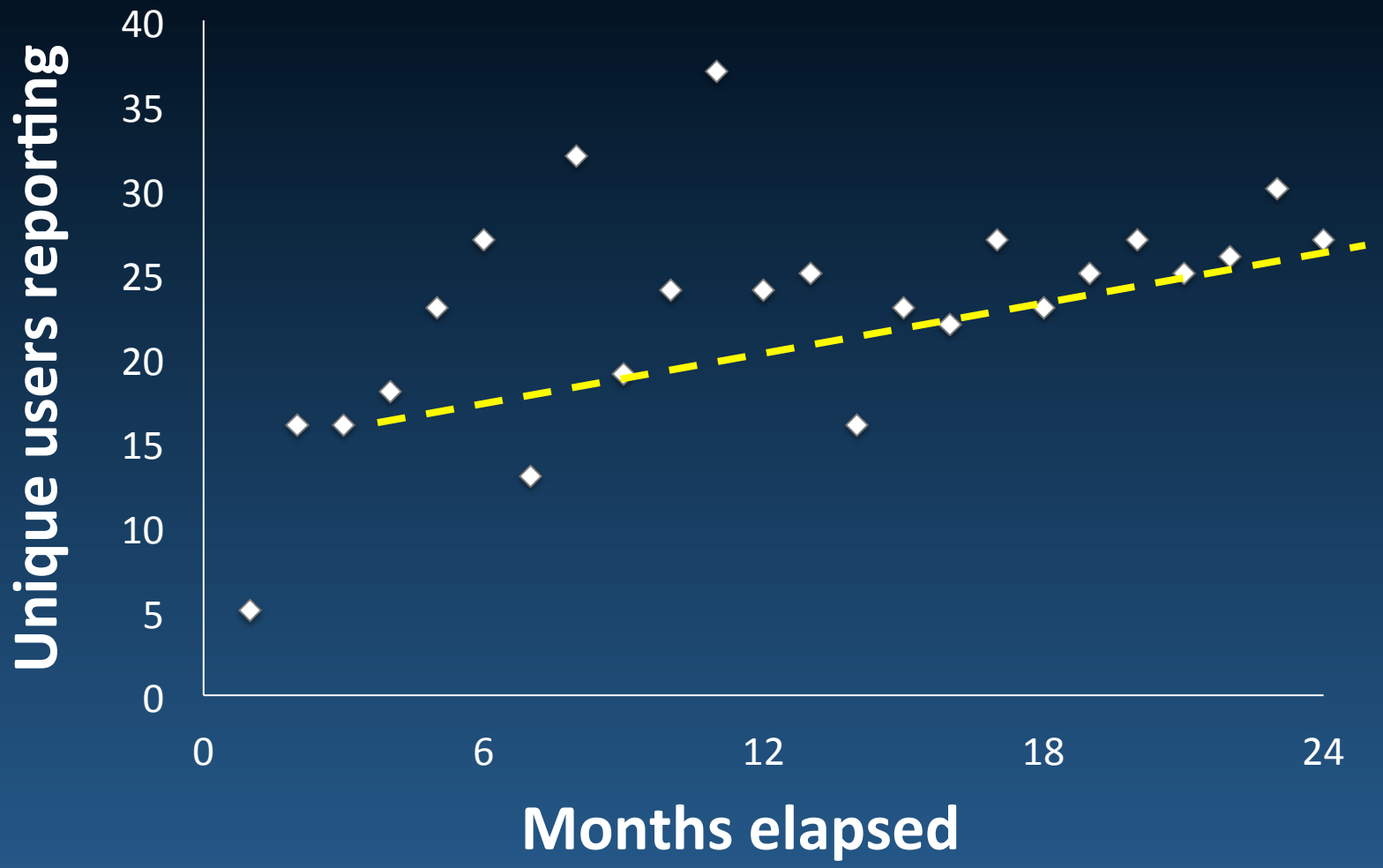
RTTs personally reprimanded for reporting errors: 16%

≈ 18%

[1]Church JA, et al. "National Study to Determine the comfort levels of radiation therapists and medical dosimetrists to report errors." PRO 2013

UNC

Staff Engagement (courtesy Eric Ford)



Nyflot et al. UWMC 2014

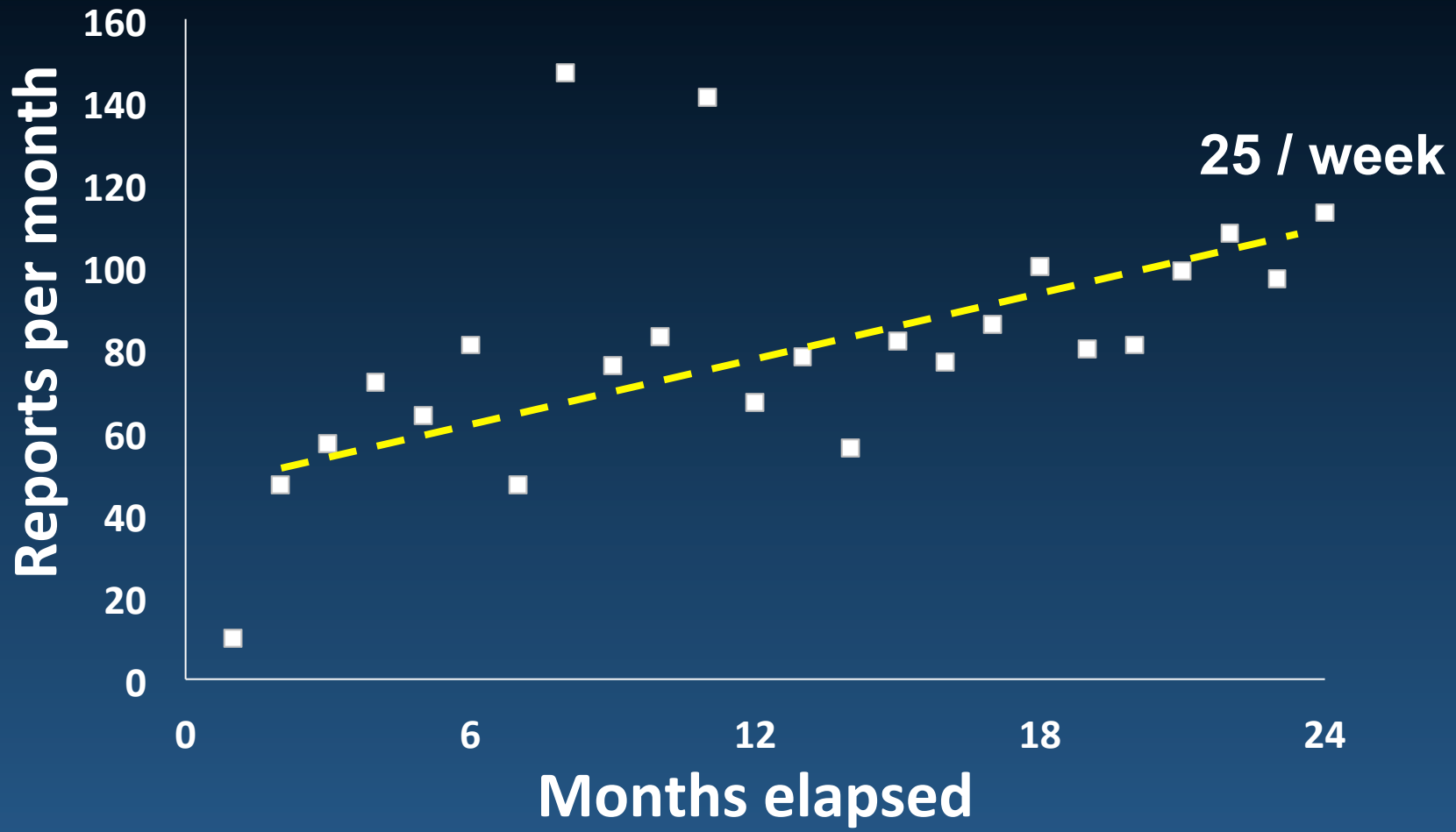
Safety Culture (courtesy Eric Ford)

	2012	*2013*	*2014*
In this unit, we discuss ways to prevent errors from happening again	66%	81%*	86%*
After we make changes to improve patient safety we evaluate their effectiveness.	46%	66%*	64%*
I have confidence that my error/near miss reports get used to improve our system.	53%	74%*	76%*

* $p < 0.01$

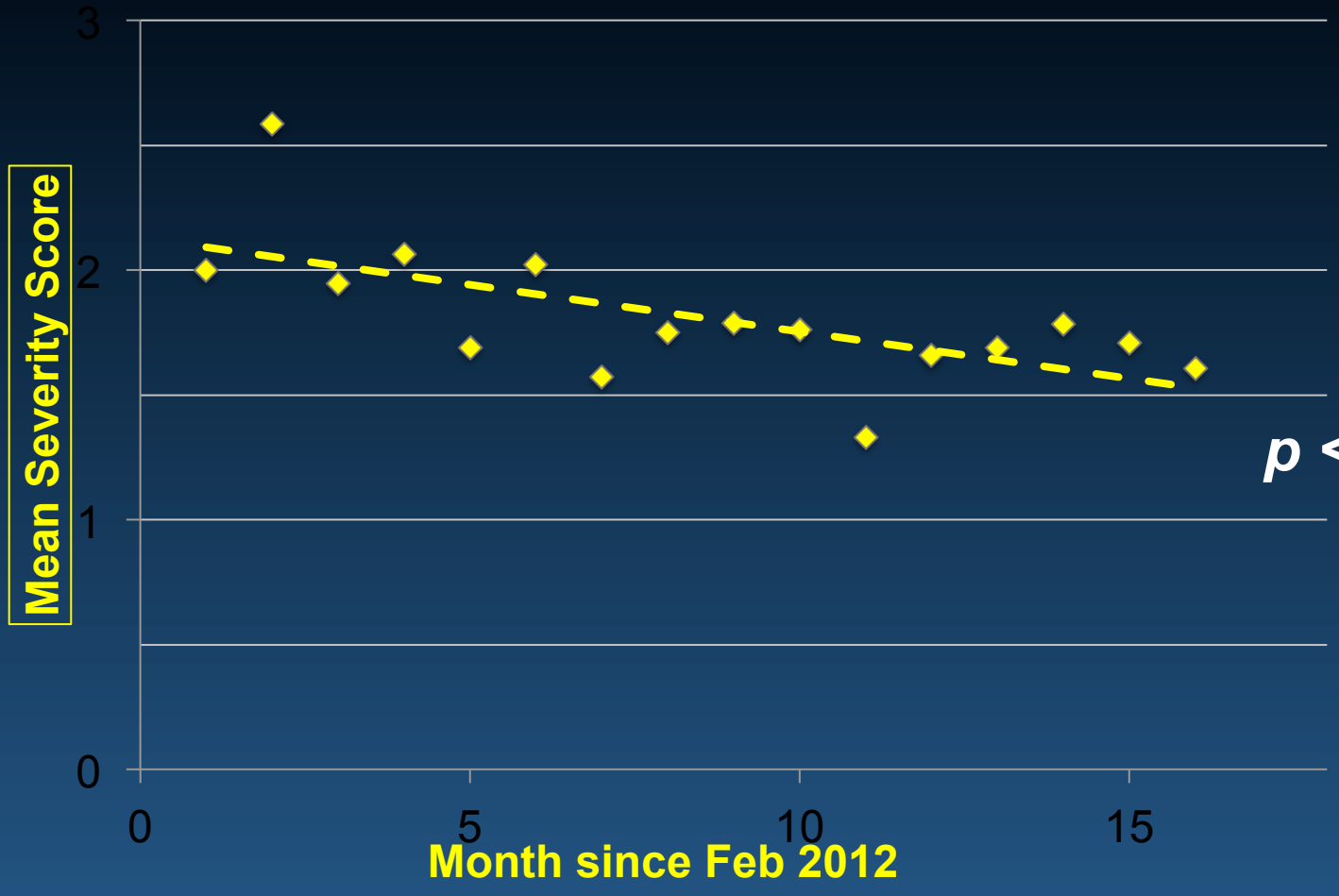
Aaron Kusano et al. PRO 2014

Reporting Volume (Courtesy Eric Ford)



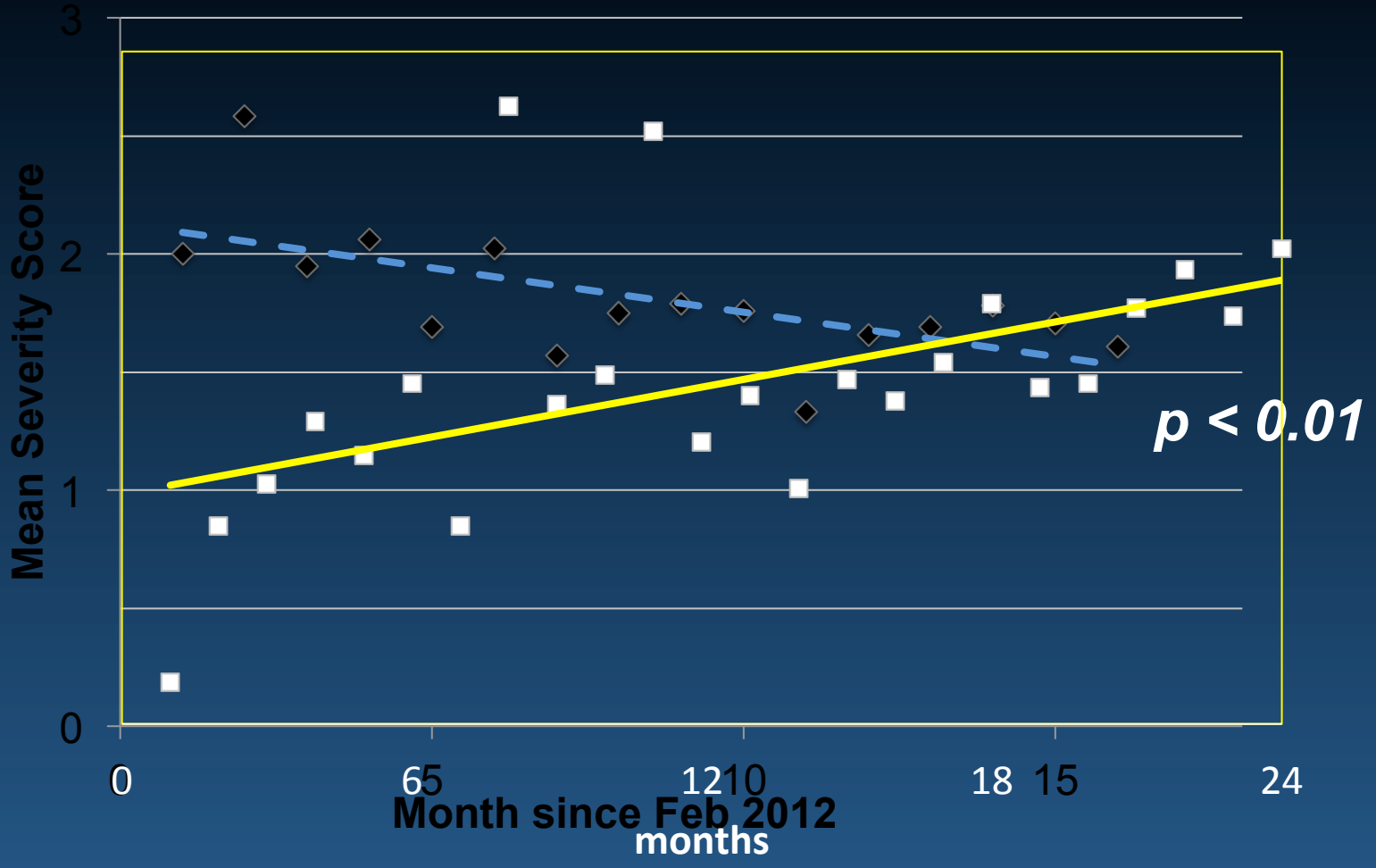
Nyflot et al. UWMC 2014

Severity of Reports (courtesy Eric Ford)



Zeng et al. 2014

Overlay Severity/reporting volume



Zeng et al. 2014

What are the benefits of incident learning?

- Incident Learning improves safety culture, increases the number of incidents reported, and severity of incidents
- Yes. These things make a difference.

SAM QUESTION

- RO-ILS is a method of
  - a. Supporting a culture of safety
  - b. Enforcing a punitive culture to identify unsafe people
  - c. Enforcing a punitive culture to identify unsafe software or hardware
  - d. Replacing your hospital system for error tracking in your department

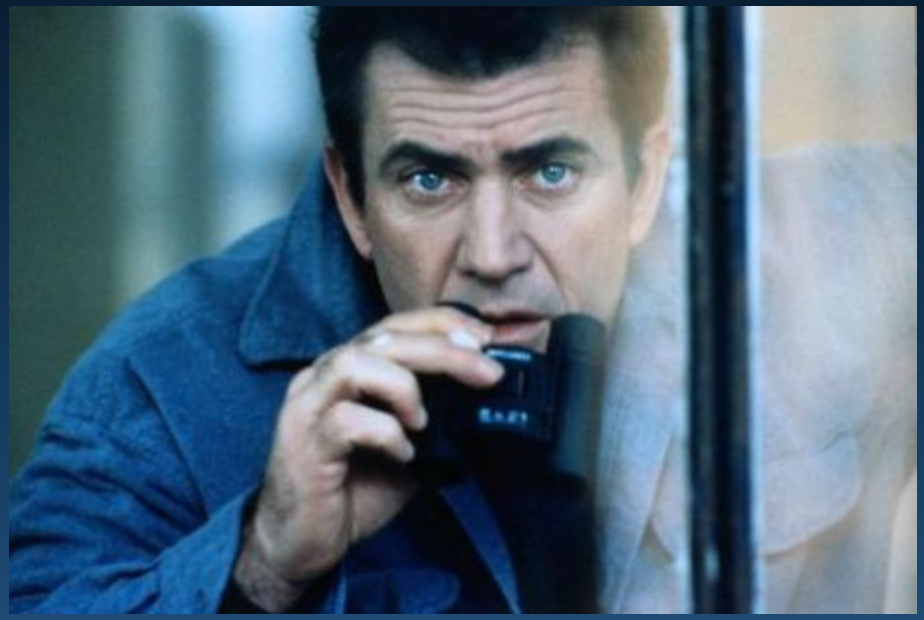
SAM QUESTION

- Using an ILS is a method of
  - a. Supporting a culture of safety
  - b. Enforcing a punitive culture to identify unsafe people
  - c. Enforcing a punitive culture to identify unsafe software or hardware
  - d. Replacing your hospital system for error tracking in your department

Kusano AS, Nyflot MJ, Zeng J, et al.Measurable improvement in patient safety culture: A departmental experience with incident learning. Pract Radiat Oncol. 2014 Oct 28. pii: S1879-8500(14)00176-3. doi: 10.1016/j.prro.2014.07.002. [Epub ahead of print]

The Conspiracy Theorist

- Gut reaction Comment: “Can data storage ever be safe?”
- Forgive them the paranoia, after all…

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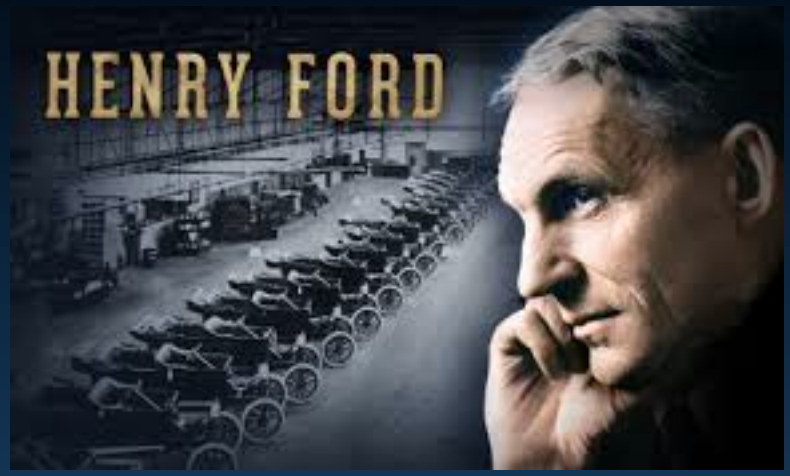
- PSO data is federally protected
- This has been tested and born out in the courts.
- Tinal versus Norton Healthcare, Inc

The Efficiency Guru

- Gut reaction
  Comment: “We don’t have time for this.”



- Duty to our patients
- Duty to our staff
- Duty to our field

- Aside from the integrity reasons…

- An ILS is customizable.
- Report everything, report only things which hit a certain dose threshold, report only things that reach the patient
- Take it at your own pace.

The Pragmatist

- Gut reaction comment: "Are we reimbursed for this?"
- "What's in it for me??"

No, but….

- Medicare is docking 1% off their reimbursement (373 million) for hospitals with the poorest performance in Hospital Acquired Conditions*:
  - central-line associated bloodstream infections, or CLABSIs.
  - catheter- associated urinary tract infections, or CAUTIs.
  - Serious Complications: based on eight types of injuries, including blood clots, bed sores and falls.

- Pay for performance is here, and it won't be long before measurable outcomes are in rad onc.

- *http://cdn.kaiserhealthnews.org/attachments/HACPenaltyChart.pdf

How does this differ from rad onc?

- Hospitalized patients have very measurable outcomes that are related to safety, easily tracked by the payers
- It is unclear what those measures will be in rad onc
- Existing data is clear presently that INCREASED reporting leads to DECREASED severity of events

My Belief…

- Heavily participating in a PSO with lots of logged incidents could be a marker for safe practices that is rewarded (or not penalized) by the payers
- Certainly it will improve the quality of your practice, and quality will be measured and affect reimbursement

- Although this does not affect reimbursement now, it's coming.

Other Benefits?

ACCREDITATION: ACR

- ACR requires: Continuous Quality Improvement (CQI)
- The Medical Director of Radiation Oncology will be responsible for the institution and ongoing supervision of the continuous quality improvement program. Elements of the program include:
- Chart review is required and should include cases in which there is a variation from prescription of greater than 10% of intended total dose, new modalities or techniques, and charts in which an incident report is filed.

ACCREDITATION: ASTRO

- ASTRO/APEX recommends: Standard 7: Culture of Safety:
- Has a policy on patient safety that:
- Articulates the practice's approach to patient safety.
- Specifies that patient safety events, including patient safety incidents and near misses, are to be reported and tracked within the practice.
- Identifies methods for staff to report patient safety events and unsafe conditions, including a method for staff to report anonymously.
- Encourages timely reporting of patient safety events and unsafe conditions by all staff.
- Reports to and participates in: A Patient Safety Organization (PSO).

Board Certification

- Participation in ROILS counts for a group Practice Quality improvement project

SAM QUESTION

- By having your department participate in RO-ILS:
  - a. Only one person can benefit by counting this for Practice Quality Improvement (PQI)
  - b. Your group can participate in RO-ILS as a team for Practice Quality Improvement
  - c. There are no benefits to the department
  - d. The whole department is sent to Hawaii for a week to participate in the annual ROILS user meeting on AAPM & ASTRO's dime.

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Radiation Oncology Incident Learning System PQI Template. Accesses January 26, 2015. https://www.astro.org/MyASTRO/Products/Product.aspx?AstroID=9611

Another Hook…

- What annoys physicians (and all of us)? Redoing work!
- Use your ILS to improve workflow!
- Look at events: not only replans, but redos of prescriptions, redos of plan signings…
- Optimize workflows. Improve safety, engage your docs!

Final Benefit…

- The second victim
- Investigation around events is useful for those involved in the event
- Support for the shattered professional self
- Morale booster to give your thoughts as the one at the sharp end as to how it can be prevented

The Under-miner

- Gut reaction comment: “Yes! Let’s do it. We need something to get these lazy therapists in line.”

(Just-in-Time) Coaching!

- This requires new techniques and a new vocabulary
- Some people just aren't able to exercise a filter in times of stress and not well well suited to incident investigation
- It's best to come to consensus about this BEFORE you are faced with an event.
- Careful language about the event is important to avoid blame, shame, etc

The Cleavers

- Gut reaction comment: “We can’t admit we have errors, what will happen to our department reputation!”
- “Things like that don’t happen here!”

The Cat is out of the Bag….

- Preventable Medical Errors are the third leading cause of death, killing 400,000 hospitalized patients a year.[1]

- 1. James, John T. PhD. A New, Evidence-based Estimate of Patient Harms Associated with Hospital Care. Journal of Patient Safety: September 2013 - Volume 9 - Issue 3 - p 122–128

SAM QUESTION

- According to recent estimates, the number of hospitalized patients killed yearly by medical errors is:
  - a. 400
  - b. 4000
  - c. 40,000
  - d. 400,000
  - e. 4,000,000

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Popular news media reports abound:


DELTA

- Incidents in radiation oncology are not uncommon.
- Rate of errors: 1/600 [1]
- 0.7% incident rate, 0.014% non minor[2] (5% threshold)

1 Ford, Int J Radiat Oncol Biol Phys 2010 2 Clark, Radiat Oncol. 2013

- Process mapping of the purely physician workflow reveals 115 tasks related to external beam.[3]
- Assuming an average of 3 failure modes per task, this reveals 345 opportunities for error. Which can be combined in 246,905 different ways…
- If as MD's were perform each task with 99% accuracy…we are perfect 31% of the time. (Sounds about right.)

[3] Evans, manuscript in preparation

- “Everything has a crack. That’s how the light gets in.”

- Leonard Cohen

The Conformist

- Gut reaction comment: “We already belong to a PSO. Why don’t you just use RL solutions?”

Benefits of National Specialty Specific ILS

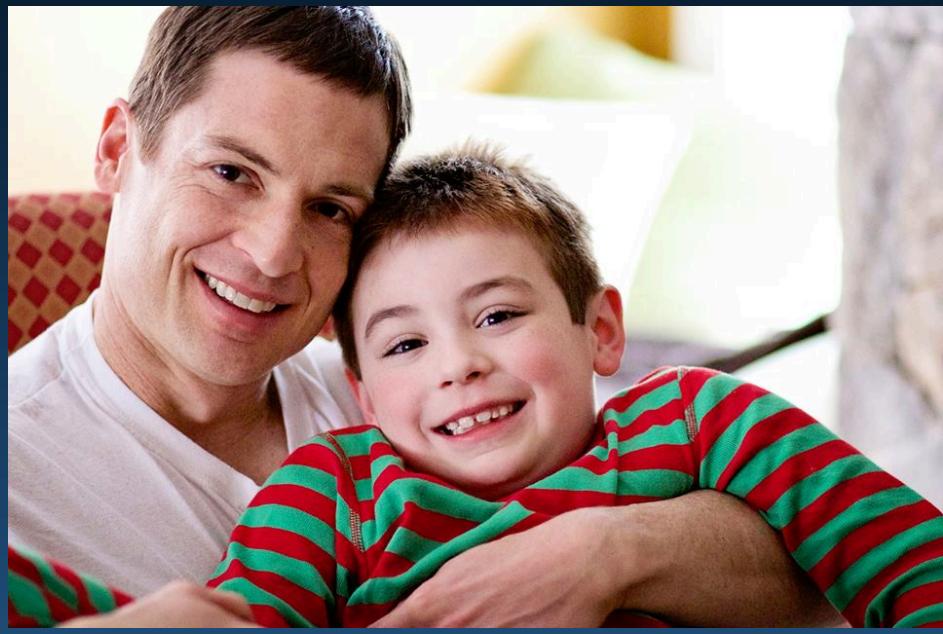
- Dissemination of best practices, collaborative learning
- Influence on the vendors
- Identification of national patterns, errors of note

Take Homes:

- Docs like data. Show them it works
- Show them it can improve both safety and workflow
- If all else fails, tell them we can do it without you.

Thank You!

- AAPM & the meeting organizers for the invitation
- My home team of talented therapists, physicists, nurses, admin staff, and physicians at Yale
- Suzanne.evans@yale.edu



Theatrical Interlude

- A skit to help illustrate what can happen when things go wrong…

Theatrical Interlude

- The Cast:
- Dr. Boom, the radiation oncologist- Susan Richardson
- Marie, physicist- Sue Evans
- Harry, the therapist- Eric Ford

Theatrical Interlude

- A patient receiving liver SBRT has almost been mistreated. The patient was aligned to a set of old tattoos from a previous treatment.
- CBCT showed the wrong location but Dr. Boom (covering for her colleague who is on a ski trip) signed off on them.
- The next day the patient comes in for treatment but Harry (new to this treatment machine) notes the problem.

Scene 1: Outside the vault…

- Harry the therapist stops Dr. Boom from her busy day…

Scene 2: Around the department

- Marie the physicist takes charge of the situation with Dr. Boom

Miniscene

- Harry the therapist shares an alarming discovery with Marie the physicist

Scene 3: The Departmental meeting