Clinical Procedure Documentation

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BACKGROUND

There has been increasing focus on the need to assess the procedural competency of resident trainees prior to becoming independent (without direct supervision) to perform clinical procedures. In addition to a robust system of assessing competency, there is a need for a tracking system to give the physician, program, and clinical organization the ability to certify that residents are appropriately supervised. Currently, there is no such mechanism. Ensuring appropriate trainee supervision for bedside procedures is a priority for both institutions and governing bodies.

Consistent and standardized procedural documentation tracking and logging is an important first step in the development of a centralized mechanism for identifying the level of supervision that each trainee requires. New Innovations (NI) was used as part of this pilot, as it gives staff the ability to quickly search for and verify the level of supervision that a trainee requires. Our Internal Medicine (IM) training program was selected for this pilot project given their high utilization of the system (NI).

As a physician, do you believe resident supervision is important?
As a patient, do you believe resident supervision is important?

AIM

1) By December 1st, 2018, we will be able to validate that at least 90% of Internal Medicine residents performing a central line, lumbar puncture, paracentesis, and/or thoracentesis logged the procedure in New Innovations within two weeks of it being performed, if applicable,
2) AND the percentage of the following 9 procedures signed off by faculty members / supervisors increased to at least 75% (on average) with a similar expectation that signoff occurred within two weeks of the procedure being documented in New Innovations:

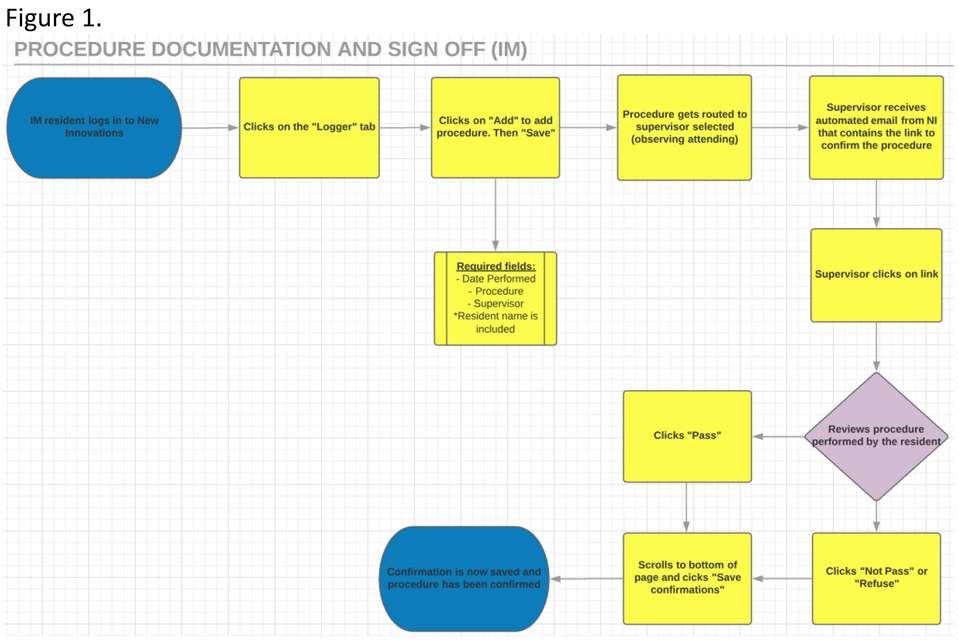
Procedures

1) Abdominal Paracentesis
2) Arterial Puncture (Drawing Arterial Blood)
3) Athrocentesis
4) Central Line Placement
5) Lumbar Puncture
6) Pap Smear and/or Endocervical Culture
7) Peripheral Venous Line Placement
8) Thoracentesis
9) Venipuncture (Drawing Venous Blood)

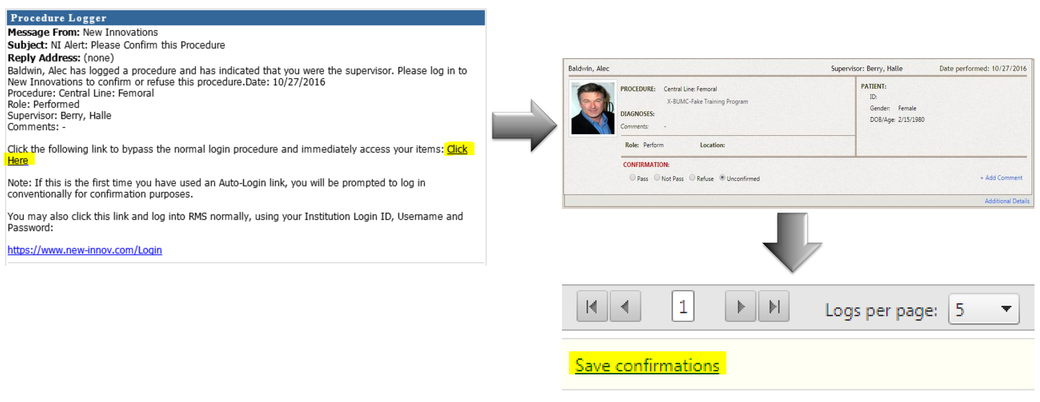
METHODS

A process map (Figure 1) was used to outline the steps required for resident procedure documentation and faculty sign off on logged procedures. Data were obtained from two different systems (New Innovations and the hospital's EHR System, EPIC). EPIC procedures were reconciled with procedures logged in NI.

Figure 1.



Automated email from NI



A PDSA cycle was employed to determine what intervention to apply to the problem and then to subsequently assess the intervention's effectiveness.

FEEDBACK → SOLUTIONS

Received from IM chief residents and faculty

- Only procedures the resident *performs* are to be documented
- Adjust EPIC report coding to ensure all procedures performed by IM residents are pulled
- Chief resident feedback: the logging of various procedures in NI, such as Lumbar Punctures, varies depending on whether the resident feels they performed the procedure competently
- Better to pull by resident name in EPIC → filtering by resident name is exceptionally complex, but more importantly, problematic, due to the constant change in trainees
- List of supervisors in NI needs to be reconciled
- Most critical: many faculty notorious for not signing off on procedures they've supervised

Procedures incorrectly sent to Associate Program Directors or other faculty

Many residents become frustrated and stop logging

Faculty are uncomfortable with signing off on procedures they did not supervise, hence why procedures remain untouched in their queue. Some faculty do however sign off, as this is the understood expectation.

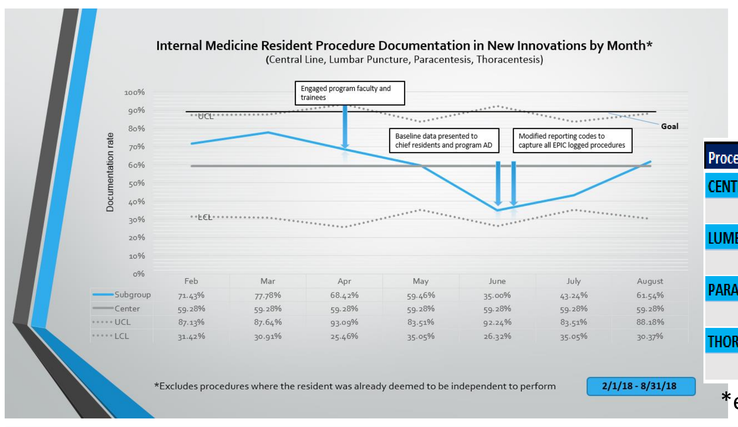
INTERVENTIONS

Baseline data were disseminated and later presented during a faculty meeting with primary stakeholders (Program Director, core program faculty, chief residents, and program administrators). A series of prior meetings with program administration and chief residents facilitated discussions and supplemented feedback. Based on feedback provided in a series of departmental meetings with stakeholders, we identified barriers and aimed to apply the following interventions:

1) Modifying the list of supervisors in New Innovations to include additional, missing faculty
2) Adjustment of EPIC coding to capture additional procedures that are being documented in EPIC under a different specialty name

RESULTS

Several procedures logged in NI, but not logged in EPIC (reason: procedures performed offsite (i.e. at the VA))

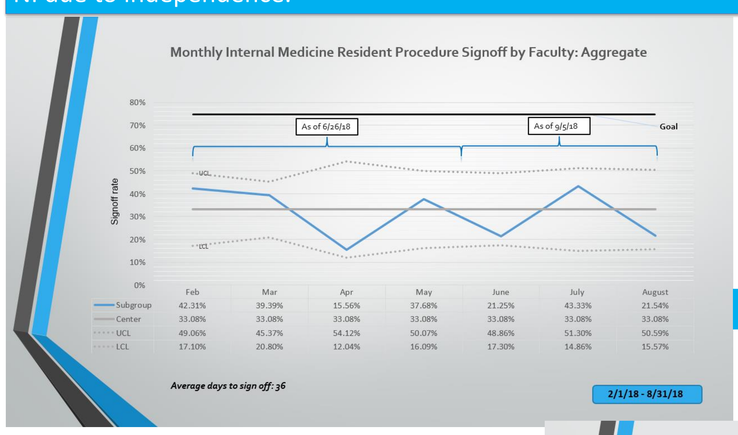


Internal Medicine Resident Documentation in NI by Month and Procedure

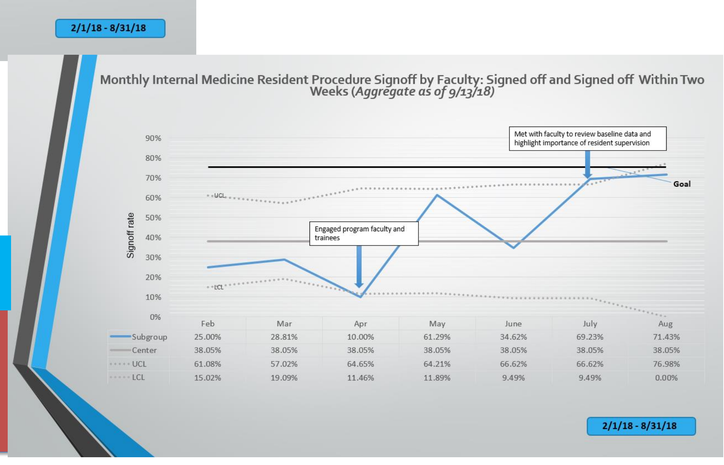
Procedure	Feb	Mar	Apr	May	June*	July	August
CENTRAL LINE (n)	13	12	10	11	10	19	4
	84.6%	75.0%	70.0%	45.5%	30.0%	31.6%	25.0%
LUMBAR PUNCTURE (n)	7	4	4	10	2	9	7
	28.6%	100.0%	75.0%	50.0%	50.0%	55.6%	71.4%
PARACENTESIS (n)	4	4	4	13	6	6	13
	75.0%	75.0%	75.0%	69.2%	16.7%	50.0%	61.5%
THORACENTESIS (n)	4	7	1	3	2	3	2
	100.0%	71.4%	0.0%	100.0%	100.0%	66.7%	100.0%

*end of academic year; onboarding of new trainees

Charts exclude procedures residents performed and were deemed independent but may not have logged in NI due to independence.



Inclusive of all 9 procedures



Of the procedures that are signed off, the percentage signed off within 2 weeks

Since implementation (April): All procedures signed off on within 2 weeks increased from 14.8% to 16.2%.

Resident documentation rate from May to June decreased from 59% to 35%, but it's important to note that June marks the end of the academic year when many trainees graduate and a new class of trainees starts.

Much more variability in the overall faculty signoff rate over the course of 7 months. Program faculty and trainees (chief residents) were engaged by the project manager in April where the 2-week signoff rate was at 10%. The signoff rate increased post baseline and steadily increased, barring the month of June (34.6%) where performance dipped but may have been influenced by the end and start of academic years.

CONCLUSIONS

This pilot project has heightened the discussion around a residency procedure tracking system, which must still be addressed, but the project did address the standardization of procedural documentation tracking and logging. We found that the IM program did not have a process to ensure procedures were being documented and confirmed. One of the successes was getting the faculty and residents in one room to discuss barriers to success as well as plausible interventions.

What worked well: Stakeholders were invested and were in agreement with established goals. The program wanted to improve their process and saw this as an opportunity to collaborate. Discussions among residents and faculty have placed greater emphasis on the importance of the project.

Barriers:

Project barriers:

a. Initial delays in EPIC data retrieval
b. Availability of stakeholders
c. Limited resources

Process improvement barriers:

a. Likelihood of moving the needle for sign offs among particular faculty members
   i. Power differential discourages residents from reminding faculty to sign off
b. Ambiguity regarding inaccuracy of supervisor drop-down list in NI (list was said to be limited)

Why barriers may have arose:

a. Resource constraint
b. Lack of accountability by faculty
c. First time program had addressed procedure documentation and sign off so the process to understand barriers was lengthy
d. Residents who have already reached competency are not as motivated to get signed off, and thus less likely to continue to document their procedures

NEXT STEPS

1) Integrating documentation and signoff process into program's "procedure elective"
2) Generating reports with additional data to determine the impact of all (continued and new) interventions. Reports to be shared with program in an effort to reach goals
3) Have program take more ownership of the process (faculty follow-up) to increase sign offs
4) Consider additional intervention(s) (i.e. repercussions for noncompliance) to increase faculty compliance
   i. Education of faculty and trainees at program's academic half-day
5) Collect feedback from faculty and residents to understand satisfaction with process
6) Determining the scalability and feasibility of using NI as the tracking system
7) Sustainability: train program administrators how to properly analyze data and generate reports to share with additional stakeholders (i.e. Program Director, faculty, and trainees)