Deterioration Without a Diagnosis? The Surprising Lack of Physician Documentation of Significant Events in Hospitalized Patients: A Multi-Institutional Retrospective Chart Review

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Background

- When a hospitalized patient experiences clinical deterioration, the documentation of events is crucial to communicate both the sequence of events as well as clinical reasoning.
- The electronic medical record (EMR) can serve a vital role to standardize communication and facilitate high quality care in these settings.[1,2]
- The frequency and quality of documentation (alert notes) in these instances is unknown.
- **Aim:** To understand the current state of alert note documentation by internal medicine (IM) residents and hospital medicine faculty when the overnight Rapid Response Team (RRT) is activated.

Alert Note Rubric

Basic Content	Present	Not Present	N/A
Reason for physician notification			
Note is written within 6 hours of event			
Clinical Assessment	**Present**	**Not Present**	**N/A**
Subjective description of patient (N/A if patient has altered mental status)			
Objective description of patient (physical exam OR labs OR imaging)			
Patient diagnosis OR differential diagnosis			
Patient Treatment Plan	**Present**	**Not Present**	**N/A**
Note contains treatment administered (or if no treatment is indicated this is stated)			
Note contains information about level of care or goals of care if applicable			
Notification of faculty (N/A on hospitalist service)			
Add up components in all columns	**A**	**B**	**C**

Expected Components Present (%) = (A) / (8 - C)

Results - Demographics

	Study cohort (N=337)
Mean patient age, (years ± SD)	64.5 ± 15.9
Male, n (%)	167 (49.6%)
Physician Level, n (%)	
Hospitalist	81 (24.0%)
Resident	256 (76.0%)
Reason for Rapid Response, n (%)	
Respiratory failure/hypoxia	132 (39.2%)
Neurologic changes	53 (15.7%)
Blood pressure changes	50 (14.8%)
Arrhythmia or EKG changes	42 (12.5%)
Chest Pain	8 (2.4%)
Bleeding	7 (2.1%)
Other or Not Documented	45 (13.3%)
Outcomes of RRT, n (%)	
Transfer to ICU	171 (50.7%)
No change in level or goals of care	131 (38.9%)
Transfer to higher level of care[a]	20 (5.9%)
Transition to comfort care	15 (4.5%)
In-hospital mortality, n (%)	95 (28.2%)

ICU = Intensive Care Unit; RRT = Rapid Response Team

[a]Higher level of care includes telemetry, intermediate care, stroke unit

Discussion

- Residents posted notes more frequently, but very rarely documented whether they notified the supervising faculty of the event.
- Posting a note faster was the only improvement seen in alert note quality by physicians with more clinical experience.
- One third of patients did not have an alert note in their chart, including 1/4th of patients who required transfer to the intensive care unit.
- Reasons for these deficiencies may include:
  - Feeling overburdened by documentation[3]
  - Lack of formal training or knowledge of documentation standards for significant clinical events

Methods

1. Alert note rubric sent to 28 expert IM faculty and residents for input on gold standard note
2. Chart review on adult internal medicine patients with RRT called 9PM - 5AM from 1/1/16 - 12/31/16

Exclusion criteria:
- Event was cardiac arrest
- Advanced practice providers
- Location in ICU or observation
- RRT did not represent a significant clinical event

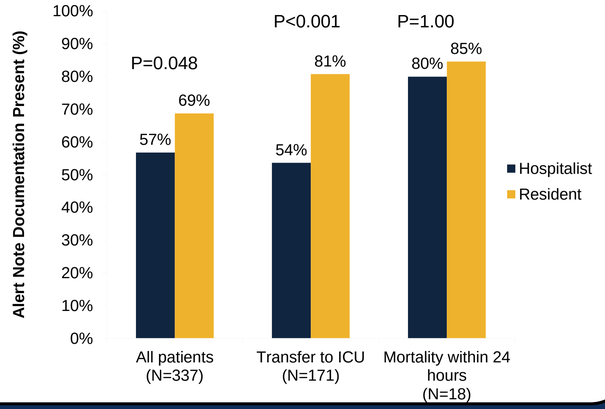
Outcomes:
1. Documentation presence
2. Documentation quality (based on rubric)
3. Factors affecting alert note presence and quality (i.e. level of training, time of year, patient outcome)

Results

Note Presence:
- Alert notes were written for 66% of patients
- Residents document alert notes more frequently than hospitalists **(Figure 1)**
  - No difference in PGY level or time of year

Note Quality and Timeliness
- The quality of alert notes written by hospitalists was greater than residents (89% vs. 84% of rubric components present, p = 0.04)
- The difference in note quality was due to faculty posting a note earlier. Notes were posted in <6 hours in 98% of hospitalists' notes vs. 84% of residents' notes (p = 0.01)
- There was no difference in documentation of subjective information, differential diagnosis, or treatment plan
- Residents document notifying attending in 7% of notes

Figure 1: Resident and Hospitalist Documentation of Rapid Response Activations Based on Patient Outcome



Conclusions and Future Directions

- The variation in practice patterns and note content is important to explore further, as it has potential implications for safe transitions in acutely decompensating hospitalized patients.
- Next steps include the use and evaluation of a template within the EMR to standardize documentation for patients who experience a significant clinical event.
- In addition, further study is needed to evaluate the direct impact that alert note documentation has on patient outcomes.

References:
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