guideline of Sepsis-3 on this journal came out until February 22, 2016, so how could this RCT carry out June 2010 to November 2012 when this guideline had not been available? We thought the diagnostic criteria should be based on the guideline of Sepsis-2, which came out on 2003 [3].

The calculation of sample size for this RCTs should be based on the primary outcomes, however, the author in the statistical analysis part of article presented that the sample size was calculated based on mortality at 28 days, which was the secondary outcome in the clinical outcomes part. To detect an absolute 20% difference in mortality at 28 days between the SFI and placebo group (40% mortality) with an 80% power at a 2-sided P value of 0.05, 79 patients without loss of follow-up needed for each group by the section of tests for two independent proportions in NCSS-PASS V.15.05 (NCSS, LLC, Utah, USA) [4]. In view of the lowest 10% rate of loss of follow-up, another 8 patients needed for each group, hence, 166 patients needed not 160.

SFI is a light yellow or light brown liquid while placebo (0.9% saline) is colorless and transparent, however, the author did not explain clearly how patients and investigators remained blinded to the treatment, which was so important for it could result in intraobserver bias in clinical outcomes (e.g. length of ICU stay, duration of vasopressor use) that leaded to a not so reliable result.

According to Surviving Sepsis Campaign: International Guidelines for Management of Sepsis and Septic Shock: 2016 [5], norepinephrine should be the initial vasopressors of choice, vasopressin and epinephrine could add to norepinephrine, dopamine should be the first alternative agent in in highly selected patients (e.g., patients with low risk of tachyarrhythmias and absolute or relative bradycardia), dobutamine should be used in patients with persistent hypoperfusion despite adequate fluid resuscitation and vasopressor use. Hence, the types and doses of vasopressor should be provided and compared not just the duration of vasopressor use.

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Perceived impact of physician-in-triage on resident education

Emergency department (ED) overcrowding is a problem that has deleterious consequences for both patients and providers. Complications from such a burden on the ED include prolonged wait times, patient dissatisfaction, decreased productivity, and increased patient mortality [1,2]. The physician-in-triage (PIT) model has become increasingly popular in ED settings with results suggestive of a positive impact on ED throughput [3-6]. Our ED implemented a novel PIT, termed the Rapid Assessment Team (RAT), exclusively for patients arriving via emergency medical services (EMS). The objective of this study is to explore the impact of our

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PIT model on resident and attending perceptions of EM resident education and patient care.

We conducted an IRB approved, cross-sectional, anonymous online survey of EM resident and attending physicians in our ED. Our Department is affiliated with a four-year ACGME accredited residency training program. The survey, developed by our research team, utilized key competencies outlined in the ACGME EM Milestone Project [7] (Fig. 1). We selected ten competencies that we believed would be most influenced by the PIT model and asked correspondents to indicate their perception on these competencies and attitudes toward the PIT model using a five-point Likert scale ranging from 1 (strongly negative) to 5 (strongly positive).

Survey data obtained from resident and attendings was reviewed (86% and 66% of eligible respondents, respectively). Spearman rank order correlation was used to determine if perceived impact and attitudes toward the RAT differ by post-graduate year (PGY) for residents or years since completion of residency for attendings. Mann-Whitney U testing was used to determine if perceived impact and attitudes toward the RAT differed between residents and attendings and those that worked in our emergency department prior to the implementation of the RAT and those that did not. Tables 1 and 2 show the responses from residents and attendings on selected competencies.

Please rate the impact in which the RAT had on various components of your education as a resident physician.

Strongly Negative	Negative	Neutral	Positive	Strongly Positive
1	2	3	4	5

1. Recognition of Critically Ill Patients
2. Performance of Focused History & Physical
3. Interpretation of Diagnostic Studies
4. Creation of Differential Diagnosis
5. Implementation of Appropriate Pharmacotherapy
6. Observation and reassessment of patients
7. Disposition Making
8. Ability to Multi Task
9. Medical Knowledge
10. Patient Safety

Please rate your agreement with the following statements.

Strongly Negative	Negative	Neutral	Positive	Strongly Positive
1	2	3	4	5

The RAT has improved medical education for residents.
The RAT has improved the overall quality of patient care in our Emergency Department.
The RAT has improved patient satisfaction with clinical services in our Emergency Department.
The RAT has improved patient throughput and overall workflow in our Emergency Department.

Fig. 1. Online survey questions (resident form).

Overall, attendings and residents perceived the RAT as having no impact on surveyed competencies with the exception of disposition making, which residents viewed as having a positive impact (median = 4 [IQR 3–4]). Comparing the two groups, residents were more likely to perceive that there was a negative impact on their medical knowledge ($U = 209.5$, $p = 0.022$) and that the PIT altered their decision making ($U = 214.0$, $p = 0.046$). Overall impression of the effect on training was viewed positively by residents (4 [3–4]) and attendings (4 [3–4]).

Residents overall had a positive attitude toward the RAT(4 [3–4]). Specifically, residents agreed or strongly agreed with the following statements about the RAT: improved the overall quality of patient care (4 [4–5]) and improved patient satisfaction with clinical services (4 [3–4]). Residents were neutral about the following statements about the RAT: improved medical education for residents (3 [2–3]); has altered my medical decision making (3 [2.5–4]); workup initiated by the RAT was consistent with what I would have done (3 [3–4]).

Attendings overall had a positive attitude toward the RAT (4 [3–4]). Specifically, attendings agreed or strongly agreed with the following statements about the PIT: improved the overall quality of patient care (4 [3–4]); improved patient satisfaction with clinical services (4 [3–4]); and workup initiated by the PIT was consistent with what I would have done (4 [3–4]). Attendings felt neutral about the statement that the PIT improved medical education for residents (3 [2–3]) and the PIT altered medical decision making (3 [2–3]).

Attendings were more likely to agree that the workup completed by the RAT was consistent with what they would have done ($U = 190.0$, $p = 0.009$). Participants differed in their impression of the RAT only on the impact of the RAT on disposition making ($U = 188.5$, $p = 0.029$). Those that worked at our hospital prior to the RAT were more likely to agree with this statement (4 [3–4]) than those that started after initiation.

Our study has several limitations. This survey analyzed perceptions rather than objective findings which limits our ability to report on the true impact of our intervention. Single site data collection and a relatively small sample size may limit our generalizability. Selection bias may have influenced data as not all eligible physicians completed the survey.

In conclusion, our results suggest that there is no overall impact on resident competencies as perceived by resident and attending physicians. Not only was this model not perceived to detract from resident training but the overall perception was viewed favorably by all respondents. Future research in this area should focus on the objective impact of operational flow improvement efforts on resident education. Academic institutions considering the implementation of similar provider-in-triage models should consider the balance between efficient patient care and the perceived impact of such improvements on resident education and training.

Table 1
Resident perceptions of the impact of the RAT on ACGME competencies.

Competency	Strongly negative	Negative	Neutral	Positive	Strongly positive
	n (%)	n (%)	n (%)	n (%)	n (%)
Recognition of critically ill patients	1 (4)	3 (12)	13 (52)	8 (32)	0 (0)
Performance of focused history and physical	0 (0)	5 (20)	15 (60)	5 (20)	0 (0)
Interpretation of diagnostic studies	0 (0)	3 (12)	16 (64)	6 (24)	0 (0)
Creation of differential diagnosis	2 (8)	8 (32)	13 (52)	2 (8)	0 (0)
Implementation of appropriate pharmacotherapy	1 (4)	3 (12)	14 (56)	7 (28)	0 (0)
Observation and reassessment of patients	1 (4)	2 (8)	12 (48)	10 (40)	0 (0)
Disposition making	1 (4)	1 (4)	9 (36)	11 (44)	3 (12)
Ability to multi task	0 (0)	0 (0)	15 (60)	8 (32)	2 (8)
Medical knowledge	0 (0)	10 (40)	12 (48)	3 (12)	0 (0)
Patient safety	0 (0)	2 (8)	14 (56)	8 (32)	1 (4)

Table 2
Attending perceptions of the impact of the RAT on ACGME competencies.

Competency	Strongly negative	Negative	Neutral	Positive	Strongly positive
	n (%)	n (%)	n (%)	n (%)	n (%)
Recognition of critically ill patients	0 (0)	1 (4)	20 (80)	3 (12)	1 (4)
Performance of focused history and physical	0 (0)	5 (20)	18 (72)	2 (8)	0 (0)
Interpretation of diagnostic studies	1 (4)	2 (8)	18 (72)	4 (16)	0 (0)
Creation of differential diagnosis	1 (4)	8 (32)	13 (52)	3 (12)	0 (0)
Implementation of appropriate pharmacotherapy	1 (4)	6 (24)	16 (64)	2 (8)	0 (0)
Observation and reassessment of patients	2 (8)	2 (8)	16 (64)	4 (16)	1 (4)
Disposition making	1 (4)	1 (4)	12 (48)	10 (40)	1 (4)
Ability to multi task	0 (0)	4 (16)	15 (60)	5 (20)	1 (4)
Medical knowledge	0 (0)	2 (8)	18 (72)	5 (20)	0 (0)
Patient safety	1 (4)	2 (8)	10 (40)	10 (40)	2 (8)

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Practice behavior of emergency department physicians caring for patients with chest pain

Chest pain is the most common medical diagnosis among adult patients admitted to emergency departments (EDs) around the world [1,2]. Several risk stratification tools have been devised to aid physicians in decision making. Three well-known risk scores are the TIMI (Thrombolysis in Myocardial Infarction) [3], GRACE (Global Registry of Acute Coronary Events) score [4], and HEART (History, ECG, Age, Risk factors and Troponin) score [5]. These scores utilize clinical, electrocardiogram (ECG), and laboratory data to identify patients in the ED who are at the highest risk for short term acute coronary syndrome (ACS) or major adverse cardiac events (MACE), and who may benefit most from aggressive therapies. The current study investigated the practice behavior of emergency physicians in caring for patients with chest pain and addressed the following; a) whether their decisions are based on validated risk-stratification scoring systems, b) whether their assessments were compatible with those of physicians' in internal medicine departments regarding the short term risk for major cardiac events and c) the management and outcomes of these patients.

The study entailed a prospective non-interventional design in which data were collected from admission notes at the ED and departments of internal medicine. We included adult patients who presented to the ED with a chief complaint of non-traumatic chest pain for which no definitive non-ischemic cause was found.

A total of 4589 patients comprised the study cohort. Of these, 763 (17%) were hospitalized for further investigation and workup. Nearly 74% of ED admission notes (for admitted and discharged patients) lacked any formal risk assessment. The rest (26%) used medical calculators available on smartphone applications. Table 1 shows reasons for hospitalization based on notes made by ED admitting physicians. The reason relevant to the largest proportion of patients was atypical chest pain and abnormal hs-cTnT (32.8%). For 16.7% of patients, hospital admissions were due to social and medicolegal concerns. Nearly one-third of hospitalized patients had a HEART score of 1–3, the rest (68%) had scores ≥4. Patients who were discharged from the ED were mostly younger males with low HEART scores (Table 2). Rates of MACE within 30 days of discharge from the ED or of hospitalization were 1.4% and 0.08% for hospitalized and discharged patients, respectively. Altogether, 10% (n = 464) of the patients in this cohort eventually underwent coronary angiography; significant coronary disease was found in 58%.

Table 1
Reasons for hospitalization of patients with chest pain based on ED[a] physicians' notes.

Summary of emergency physicians notes	No. of hospital admissions (%) n = 763
Unstable angina/non ST-elevation MI[a] (typical chest pain with new ECG changes and/or elevated hs-cTnT)[b]	136 (17.8)
Typical chest pain with multiple[c] cardiovascular risk factors (normal hs-cTnT, without new ECG changes)	75 (9.8)
Atypical chest pain with multiple[c] cardiovascular risk factors (normal hs-cTnT, without new ECG changes)	174 (22.8)
Atypical chest pain with abnormal hs-cTnT (with or without cardiovascular risk factors, and without new ECG changes)	251 (32.9)
Other[d] (normal hs-cTnT, without new ECG changes)	127 (16.7)

[a] ED; emergency department, MI; myocardial infarction.
[b] hs-cTnT: high sensitivity cardiac troponin-T.
[c] Multiple; ≥ 3 risk factors.
[d] Patient's or spouse's concern for adverse outcomes, patients' refusal for outpatient workup, and ≥2 ED visits due to chest pain within 1 week.