

From Scrimmage to Image: *Should EMS Triage(stroke) Patients Directly* *to the CT Scanner?*

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Questions to consider...

- 1- What's most important in Stroke?
- 2- EMS driven protocols should be accepted norm?
- 3- Does a process already exist? Where to exert effort?? PSC, CSC, other center??



Door to treatment in ≤ 60 min



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AHA/ASA Guideline

2018 Guidelines for the Early Management of Patients With Acute Ischemic Stroke

**A Guideline for Healthcare Professionals From the American Heart
Association/American Stroke Association**

e6 *Stroke* March 2018

1. Prehospital Stroke Management and Systems of Care

1.1. Prehospital Systems



1.2. EMS Assessment and Management (Continued)	COR	LOE	New, Revised, or Unchanged
3. EMS personnel should provide prehospital notification to the receiving hospital that a suspected stroke patient is en route so that the appropriate hospital resources may be mobilized before patient arrival.	I	B-NR	Recommendation reworded for clarity from 2013 AIS Guidelines. Class unchanged. LOE amended to conform with ACC/AHA 2015 Recommendation Classification System. See Table LXXXIII in online Data Supplement 1

2.2. Brain Imaging

2.2. Brain Imaging	COR	LOE
1. All patients admitted to hospital with suspected acute stroke should receive brain imaging evaluation on arrival to hospital. In most cases, noncontrast CT (NCCT) will provide the necessary information to make decisions about acute management.	I	B-NR

2. Systems should be established so that brain imaging studies can be performed within 20 minutes of arrival in the ED in at least 50% of patients who may be candidates for IV alteplase and/or mechanical thrombectomy.	I	B-NR	New recommendation.
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The Flock...

- EMS Stroke Alert & EMS to CT
- 98 % (44/45) EMS Stroke Alert from field
- 50% (22/44) EMS direct to CT *



ORIGINAL CONTRIBUTIONS

OBSERVATIONAL MULTICENTER STUDY OF A DIRECT-TO-CT PROTOCOL FOR EMS-TRANSPORTED PATIENTS WITH SUSPECTED STROKE

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FIGURE 1 Locations of participating hospitals. Figure by Dr. Sean. Marquis.

Objective: In an effort to decrease door-to-needle times for patients with acute ischemic stroke, some hospitals have begun taking stable EMS patients with suspected stroke directly from the ambulance to the CT scanner, then to an emergency department (ED) bed for evaluation. Minimal data exist regarding the potential for time savings with such a protocol. The study hypothesis was that a direct-to-CT protocol would be associated with decreases in both door-to-CT-ordered and door-to-needle times. **Methods:** An obser-

Mann-Whitney test to compare time medians. **Results:** Seven hospitals contributed data on 1040 patients (529 “before” and 511 “after”); 512 were male, and 627 had final diagnoses of ischemic stroke, of whom 275 received tPA. The median door-to-CT-ordered time for all patients was 7 minutes in the before phase, and 4 minutes after (difference 3 minutes, $p = < 0.0001$); similarly, the median door-to-CT-started time was 6 minutes “before” and 10 minutes after ($p < 0.0001$). The median door-to-needle time for all patients given tPA was 42 minutes before, and 44 minutes after ($p = 0.78$). Four hospitals had modest decreases in door-to-

TABLE 2. Analysis of patients receiving thrombolysis in
<30, <45, and <60 min

	Before			After			p-value*
	Yes	No	% Yes	Yes	No	% Yes	
<30 min	47	134	26	31	63	33	0.26
<45 min	100	81	55	49	45	52	0.70
<60 min	140	41	77	69	25	73	0.46

*by Fisher's exact test.



$p = 0.012$). **Conclusions:** In this sample from seven hospitals, a minimal reduction in door-to-CT-ordered and door-to-CT-started time, but no change in door-to-needle time, was found for EMS patients with suspected stroke taken directly to the CT scanner, compared to those evaluated in the ED prior to CT. **Key words:** emergency medical services; stroke; emergency medical technicians

PREHOSPITAL EMERGENCY CARE 2018;22:1–6

CONCLUSION

In this observational sample from seven hospitals, a direct-to-CT protocol for EMS patients being transported for possible stroke was associated with a small improvement in door-to-CT-ordered and door-to-CT started intervals, but no change in door-to-needle intervals.

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THANKS TO

EMS



I WILL NEVER
LOOK AT COFFEE
GROUNDS THE
SAME WAY

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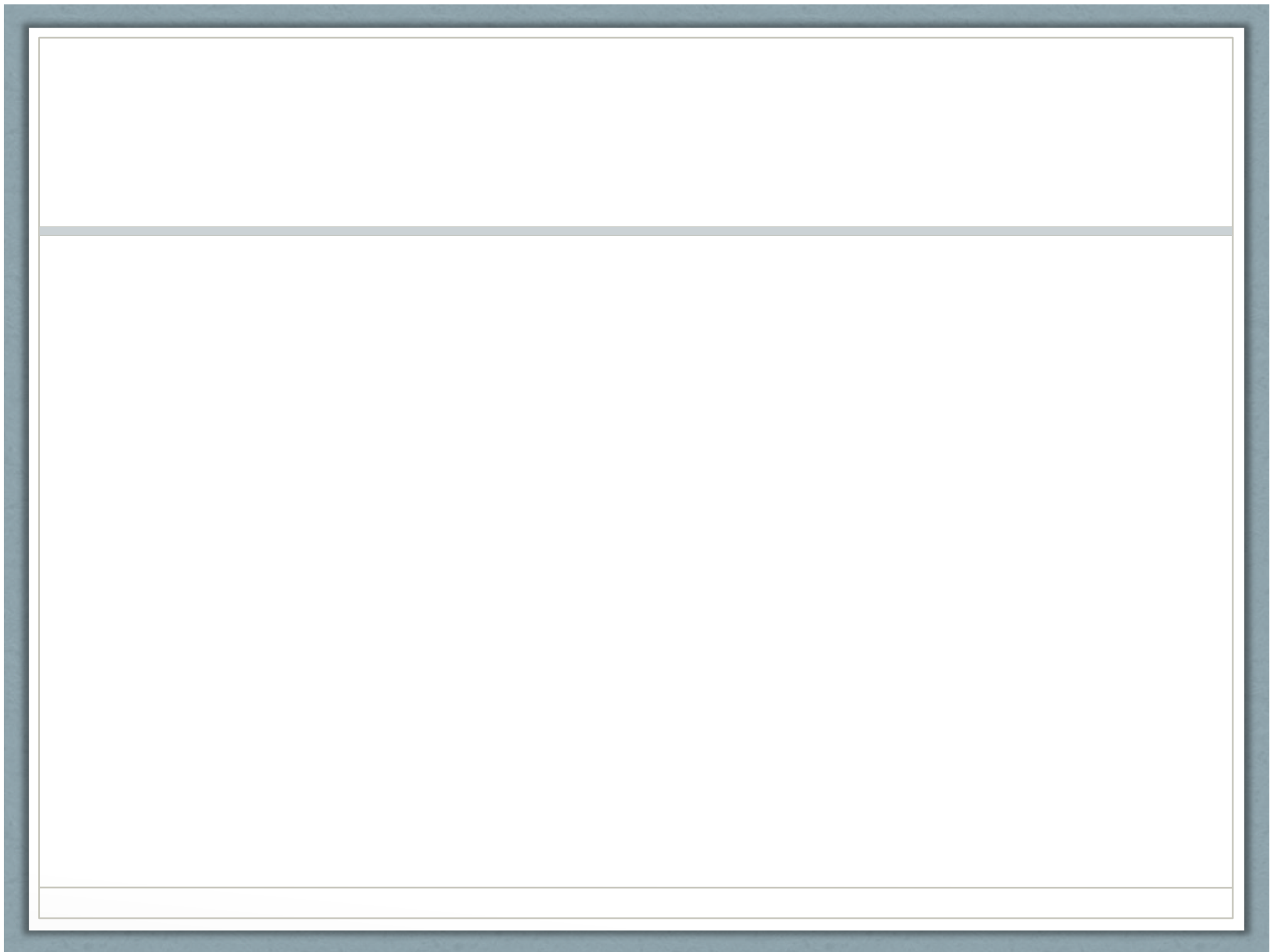
October 9, 2016 Albuquerque, NM Pill count 3000+

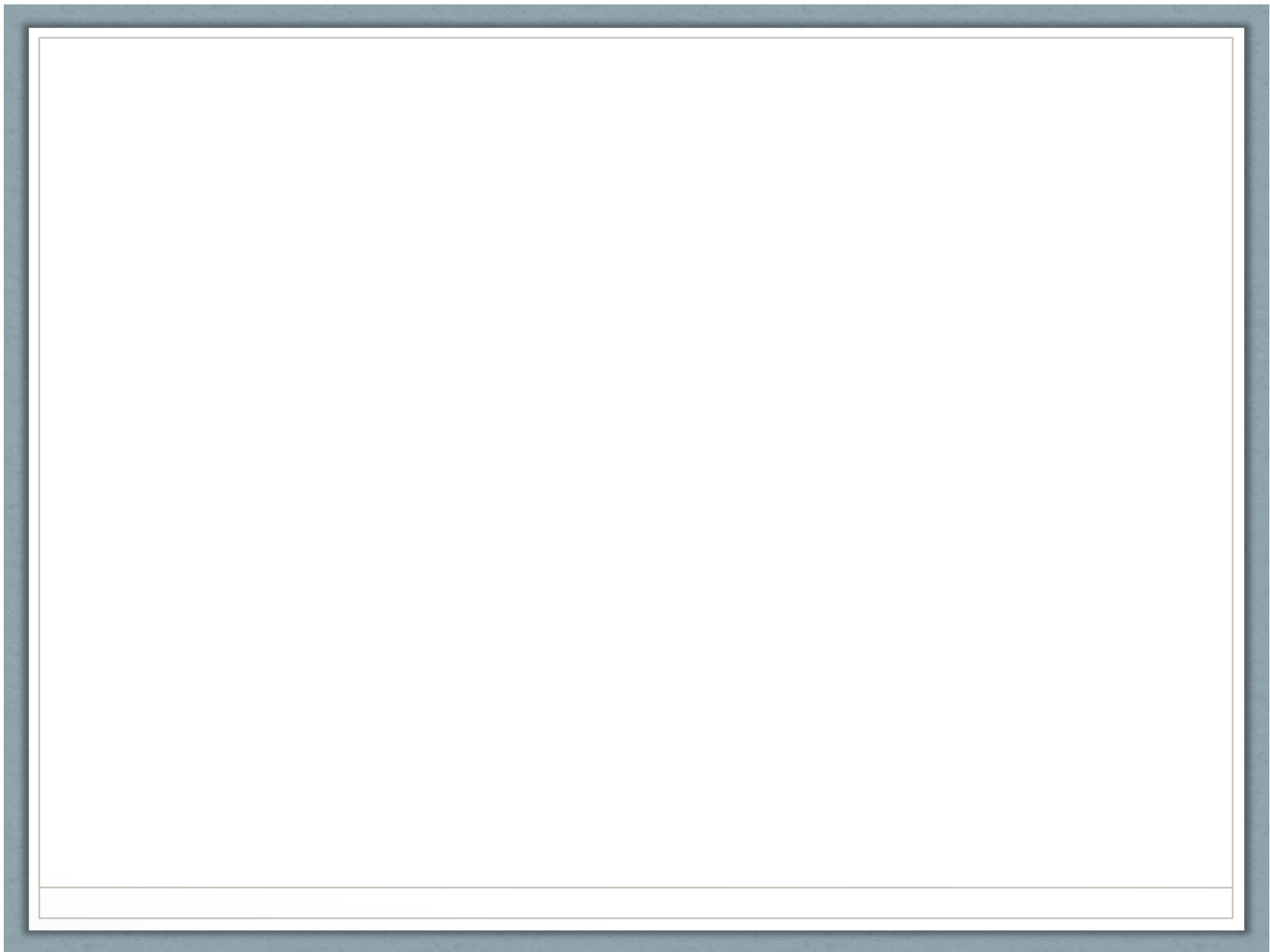


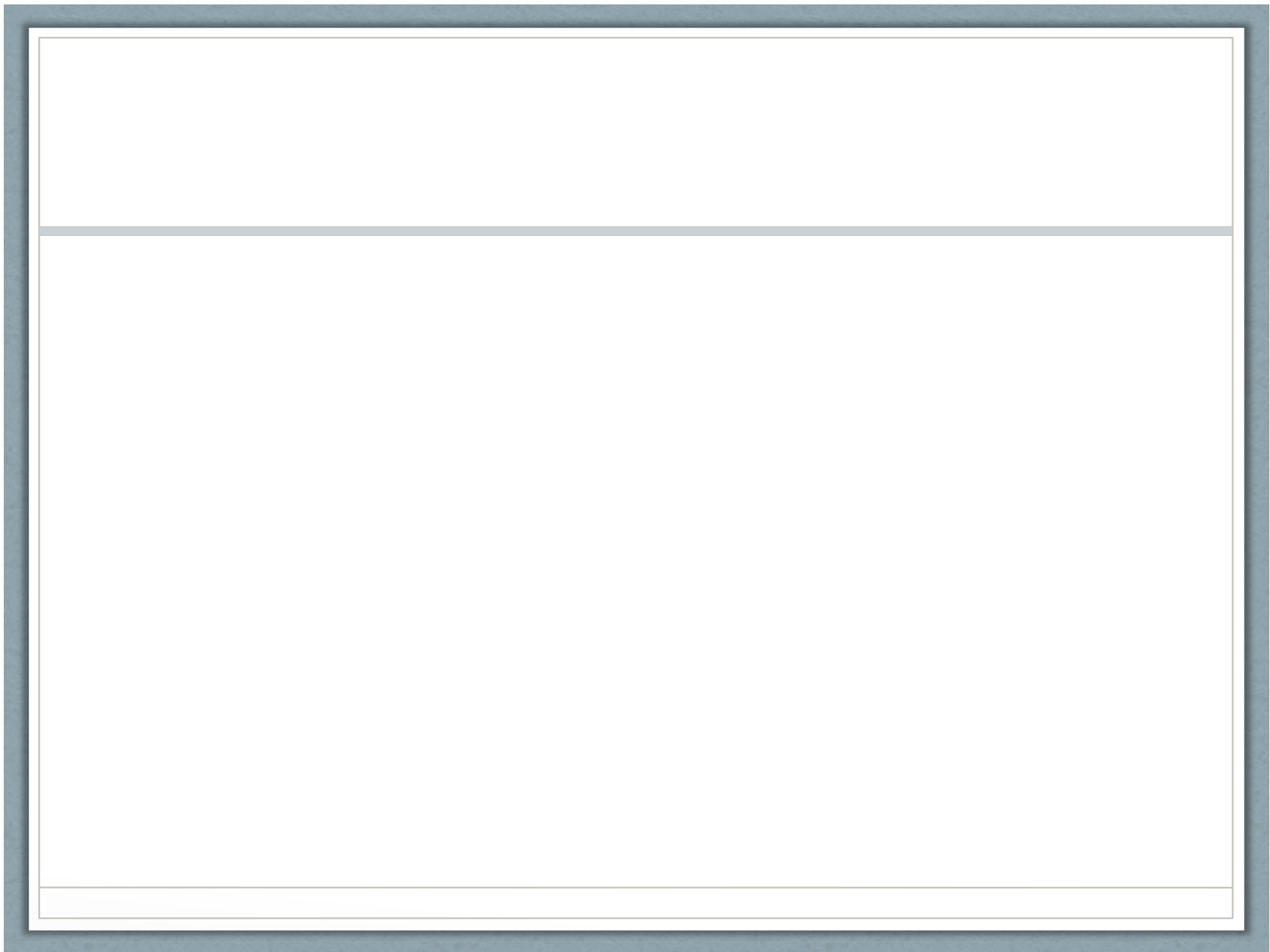


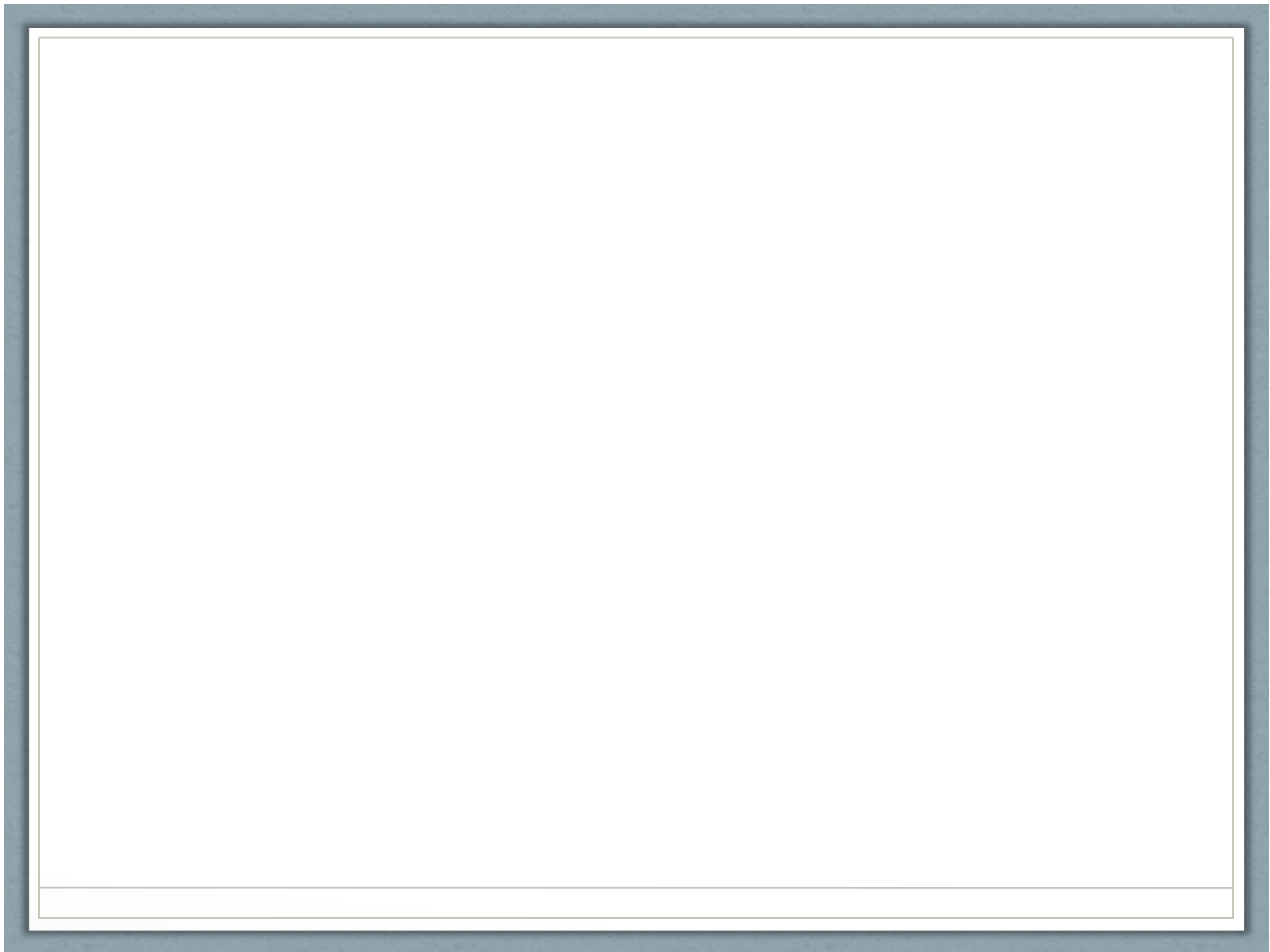






















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