

**Table 1.** Question Type.

	Proportion (%)	Confidence Interval (%)
<b>Action Domain</b>		
• Therapy	52.96	47.30, 58.54
• Diagnosis	23.68	19.22, 28.82
• Prognosis	9.54	6.70, 13.42
• Harm	13.82	10.36, 18.20
<b>Organ System</b>		
• Neuro	11.63	8.45, 15.79
• CV	19.60	15.48, 24.50
• Pulm	8.64	5.94, 12.41
• GI	10.30	7.32, 14.30
• GU	7.31	4.85, 10.87
• Heme	5.32	3.27, 8.52
• ID	14.62	11.04, 19.10
• Tox	4.65	2.77, 7.72
• Trauma	4.98	3.02, 8.12
• Other	11.96	8.74, 16.16

**Table 2.** Search sources and results.

	Proportion (%)	Confidence Interval (%)
<b>Sources searched</b>		
• Summaries	46.53	40.95, 52.20
• Guidelines	14.85	11.26, 19.34
• Synopses of syntheses	10.23	7.27, 14.21
• Syntheses	34.00	28.85, 39.54
• Synopses of studies	4.29	2.50, 7.27
• Studies	79.54	74.59, 83.73
• Other	57.43	51.76, 62.91
<b>Source of target article</b>		
• UTD, ACP Pier, Dynamed	7.89	5.34, 11.53
• NGC	2.30	1.10, 4.77
• DARE, Annals of EM SRS	0.66	0.16, 2.61
• Cochrane	12.83	9.50, 17.11
• ACP Journal Club	0.33	0.05, 2.32
• Pubmed/Medline	36.18	30.95, 41.77
• Trip	8.55	5.88, 12.29
• Google	21.38	17.11, 26.38
• Other	4.28	2.49, 7.25
• Not Found	5.59	3.49, 8.83
<b>Type of target article</b>		
• Review article	23.84	19.35, 29.00
• Guideline	5.96	3.78, 9.28
• Synopsis of synthesis	7.28	4.83, 10.84
• Synthesis	14.57	11.00, 19.04
• Synopsis of single study	0.33	0.00, 2.34
• RCT	10.60	7.58, 14.63
• Cohort	15.23	11.59, 19.77
• Cross-sectional	3.97	2.26, 6.89
• Case-control	4.30	2.51, 7.29
• Other	10.26	7.30, 14.25
• Not found	3.64	2.02, 6.48

## 47 Validation of a Behaviorally Anchored Evaluation form for Resident Lectures

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**Background:** Developing and delivering high quality lectures is a critical skill for residents seeking a career in academic Emergency Medicine. Validated tools for assessing resident lectures currently do not exist.

**Objectives:** We developed and tested a behaviorally anchored tool for assessing resident lectures.

**Methods:** We used a literature-based, consensus-building methodology to derive a lecture assessment tool (Fig. 1). We obtained resident baseline characteristics including training level and comfort with lecturing using a 1-5 Likert scale. During conference, faculty and senior resident evaluators used the assessment tool for all resident lectures. Performance in each domain of the lecture assessment was compared to training level and comfort with lecturing using ANOVA with a post-hoc Bonferroni correction. Generalizability theory testing was used to assess reliability of the scoring. A post-intervention survey was sent to faculty and residents to assess the quality of the feedback and the usability of the assessment tool.

**Results:** The baseline survey was completed by 64 residents. First-year residents performed worse than more advanced residents in the domains of content expertise and lecture presence (Fig. 2). Residents who felt uncomfortable with lecturing on the baseline survey performed more poorly in the domain of lecture presence than those who indicated they were comfortable with lecturing ( $p < 0.0001$ ). There was fair reliability for all domains (G coefficients 0.445 to 0.529) except Goals & Objectives (G coefficient 0.198). On the post-intervention survey, 87% of 39 evaluators indicated they found the form to be usable and 92% indicated they were able to complete the form during the resident lecture. 96% of lecturers indicated the feedback they received was at least somewhat specific, 96% indicated the quality of the feedback was adequate to excellent, and 92% indicated the amount of feedback was adequate or more than they would have expected.

**Conclusions:** The derived lecture assessment tool is easy to use and provides specific, quality feedback. Scoring on the behaviorally anchored assessment displays fair reliability. Lecturer performance in the content expertise and lecture presence domains correlate with training level. Performance in the domain of lecture presence correlates with subjective comfort with lecturing.

PRESENTER: \_\_\_\_\_ DATE: \_\_\_\_\_  
 TOPIC: \_\_\_\_\_  
 LECURE ASSESSMENT FORM  
 LEADERSHIP • EXCELLENCE • OPPORTUNITY

Please use this space to provide narrative feedback to the lecturer.

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Please select the level *most consistent* with the performance/preparation of the lecturer

Competency Domains	Level 1	Level 2	Level 3	Level 4	Level 5
<b>Goals &amp; Objectives / Content Relevance</b>	<ul style="list-style-type: none"> <li>Does not state the goals of the lecture</li> <li>Goals not relevant to the clinical practice of the audience, or stated goals unrealistic</li> <li>Subject matter not specific or relevant to audience</li> </ul>	<ul style="list-style-type: none"> <li>Goals/objectives implied but not clearly stated</li> <li>Goals/objectives are relevant but not achievable in either lecture format or time frame</li> </ul>	<ul style="list-style-type: none"> <li>Goals and objectives clearly stated</li> <li>Goals and objectives achievable in time frame allotted</li> <li>Content of the topic somewhat relevant to the audience</li> </ul>	<ul style="list-style-type: none"> <li>Goals and objectives clearly stated and successfully met by the lecture</li> <li>All content within the lecture is relevant and/or of interest to the audience</li> </ul>	<ul style="list-style-type: none"> <li>Specific, stated goals relevant to clinical practice of learners of all levels of training</li> <li>Subject matter specifically tuned to audience interest and skill level</li> <li>Goals and objectives focused on clinical implications of content</li> </ul>
<b>Content Expertise</b>	<ul style="list-style-type: none"> <li>Speaker has superficial knowledge of the topic</li> <li>Unable to answer simple questions from the audience</li> <li>Presented lecture content inaccurate or not representative of latest evidence</li> </ul>	<ul style="list-style-type: none"> <li>Able to answer basic fund-of-knowledge questions, but has difficulty with more complex questions</li> <li>Presents less relevant or less current evidence to support lecture content</li> </ul>	<ul style="list-style-type: none"> <li>Able to answer some questions from audience, defers to available expertise when appropriate</li> <li>Appropriate use of evidence to support lecture content</li> </ul>	<ul style="list-style-type: none"> <li>Able to answer most questions without external support</li> <li>Content representative of latest available evidence</li> </ul>	<ul style="list-style-type: none"> <li>Recognized by peers as expert on topic</li> <li>Seamlessly answers all questions</li> <li>Responses to questions reflect a breadth and depth of knowledge</li> <li>Content reflects a mix of evidence-based discussion and appropriate experiential input</li> </ul>
<b>Competency Domains</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>
<b>Presentation Design/ Structure</b>	<ul style="list-style-type: none"> <li>Audiovisuals that are unrelated to the topic, or lack professionalism</li> <li>Material difficult to read</li> <li>Multiple text errors/typos</li> <li>Disorganized or unclear presentation structure</li> </ul>	<ul style="list-style-type: none"> <li>Audiovisuals are professional but superficial to the presentation</li> <li>Few text errors/typos</li> </ul>	<ul style="list-style-type: none"> <li>Uses a balance of text and audiovisual materials</li> <li>Uses material as a roadmap for presentation without over-reliance on materials</li> <li>Appropriate use of audiovisuals (avoids extraneous materials)</li> <li>Logical presentation structure</li> </ul>	<ul style="list-style-type: none"> <li>Appropriately discusses and interprets audiovisuals for audience</li> <li>Minimizes text, uses audiovisual material as cue</li> </ul>	<ul style="list-style-type: none"> <li>Audiovisual content enhances concepts being taught and spoken presentation</li> <li>Introduces new concepts early in lecture</li> <li>Provides closure at the end of lecture</li> <li>Creative and effective use of novel design modalities</li> </ul>
<b>Audience Engagement</b>	<ul style="list-style-type: none"> <li>Speaker has minimal interaction with the audience</li> <li>Reads from script</li> </ul>	<ul style="list-style-type: none"> <li>Questions directed to the audience ineffective in stimulating discussion</li> <li>Addresses to rigid teaching plan</li> <li>Attempts to interact with audience, but unsuccessfully</li> </ul>	<ul style="list-style-type: none"> <li>Encourages audience participation through open-ended questioning or by inviting questions from the audience</li> <li>Uses simile/analogy/metaphor/ anecdotes</li> </ul>	<ul style="list-style-type: none"> <li>Effectively manages off-topic questions</li> <li>Questions audience to monitor acquisition of knowledge/ learner engagement</li> <li>Uses silence effectively to allow for audience response</li> </ul>	<ul style="list-style-type: none"> <li>Allows audience to take active role in lecture (small group exercises, directed questioning, encourages dialogue)</li> <li>Uses simile/analogy/metaphor/ anecdotes that meaningfully connect with audience</li> <li>Audience inspired to learn more about lecture content</li> </ul>
<b>Lecture Presence</b>	<ul style="list-style-type: none"> <li>Does not leave oneself physically open to the audience (back to audience/ anchored to lectern)</li> <li>Excessive or distracting postulations</li> <li>Multiple verbal placeholders (umms)</li> <li>Voice does not project</li> <li>Inappropriate dress</li> <li>Inappropriate language or humor</li> <li>Directly reads from materials</li> </ul>	<ul style="list-style-type: none"> <li>Monotonous verbal tone</li> <li>Does not respect lecture timing</li> <li>Casual dress</li> <li>Leans on podium/poor posture</li> <li>Reads from materials rarely or recites lecture by rote memory</li> </ul>	<ul style="list-style-type: none"> <li>Few verbal placeholders</li> <li>Effective eye contact with audience</li> <li>Most content delivered without reliance on notes</li> <li>Appropriately dressed for lecture setting</li> <li>Lecture prepared to fit the allotted time</li> <li>Voice projects well</li> </ul>	<ul style="list-style-type: none"> <li>No verbal placeholders</li> <li>Uses inflection and changes of cadence of speech to highlight key points</li> <li>Effective time management despite unexpected interruptions</li> <li>Moves throughout lecture space with purpose</li> </ul>	<ul style="list-style-type: none"> <li>Presenter a role model for more junior lecturers</li> <li>Inspires others through presentation</li> <li>Audience eager for additional lectures by speaker</li> </ul>

EVALUATOR: \_\_\_\_\_

Fig. 1.

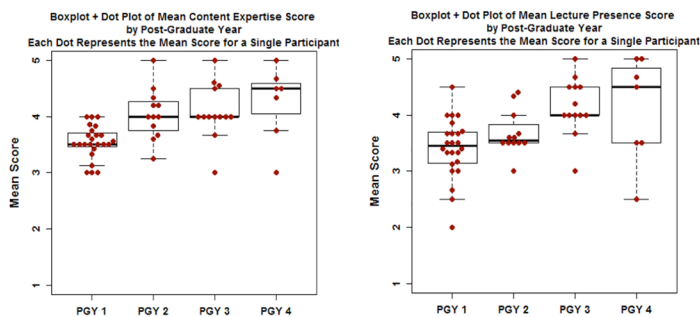


Fig. 2.

## 48 What's All The Chatter? A Mixed-Methods Analysis of Emergency Physician's Tweets

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**Background:** Twitter is growing in popularity and influence among emergency physicians (EP), with over 2,200 self identified EP users. Despite this popularity, there are competing ideas about its value for EPs. Some argue that social media is time wasted. Others assert a virtual community of practice exists among EPs on Twitter sharing a common domain, community, and practice. Deep exploration of the conversation, culture, and content of Twitter use among EPs can help us better understand its value while promoting mindful social media engagement.

**Objectives:** To explore the nature of EPs conversations on Twitter.

**Methods:** We performed a mixed methods analysis of publicly available tweets from the 62 most influential EPs on Twitter defined in a previous study. We analyzed tweets from a sample of random days in 2015. In addition to recording quantitative data, we performed qualitative thematic analysis to analyze tweets. We followed best practices in qualitative research, including reflexivity, memoing, and using a diverse team of coders.

**Results:** 1084 unique tweets were analyzed. The majority of tweets (75%) had some engagement in the form of re-tweets, likes, or replies. Messages were split evenly between new initiations of conversation and replies to other tweets (52%, 48% respectively). Most were related professionally to the broad domain of medical practice (70%), while fewer were social (30%). 79% of tweets were statements, 9% were questions, and 12% answers to questions. We identified several distinct types of tweets. Common observed themes among tweets are presented in Table 1. Self promotion and advertisements were rare, occurring in less than 5% of tweets.

**Conclusions:** Influential EPs are engaging in professional and social conversations on Twitter. Resources and opinions are being shared and rapport is being built. This data may help inform mindful social media engagement. Next steps include exploring perceptions of value of Twitter to individual faculty and resident users.