

Development of an Evidence-Based Medicine Journal Club to Increase Medical Student Exposure to Clinical Research Prior to Residency

Megan D'Andrea*, Katherine Phillips*, Daniel Leisman, Taylor Miller, John Power, Elizabeth Gromet, Kastaur Shivani, Parth Kotari, Mohammad Hissourou, Oren Cohen*, Andrew Coyle**

Background

Rationale

Evidence-based medicine (EBM) is becoming the dominant method for teaching at all stages of medical education. When taught effectively, EBM provides students the skills to efficiently search current literature and integrate their findings into patient care. Journal Club (JC) has been shown to be a valuable asset for improving EBM knowledge and skills in various medical settings.

Research Objectives

In 2017, an EBM JC was founded at ISMMS and was organized according to the central tenants of EBM. A needs assessment measured students' perceptions of their current exposure to EBM in the medical student curriculum, their interest in participating in JC, and desired skills to be gained from JC.

Study Design

- The needs assessment was emailed to all third year ISMMS MD students in January 2017
- It contained 23 questions, including demographic questions and questions to assess students' opinions on the presence of EBM in their medical education and their interest in learning about EBM in a JC setting
- Survey items assessing the presence of EBM in the MD curriculum were scored on a 5-point Likert scale

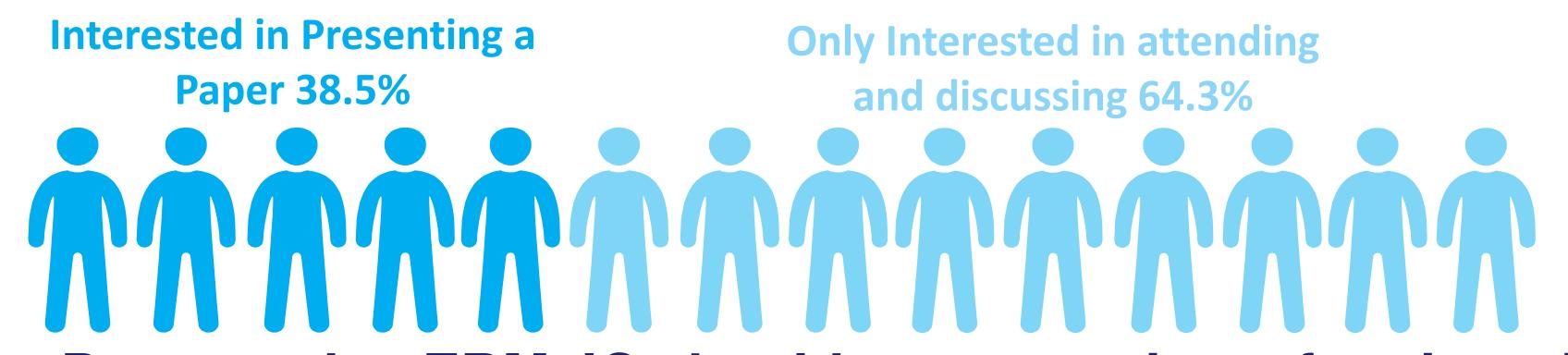
Results

Table 1: EBM Presence in Current Medical Education.

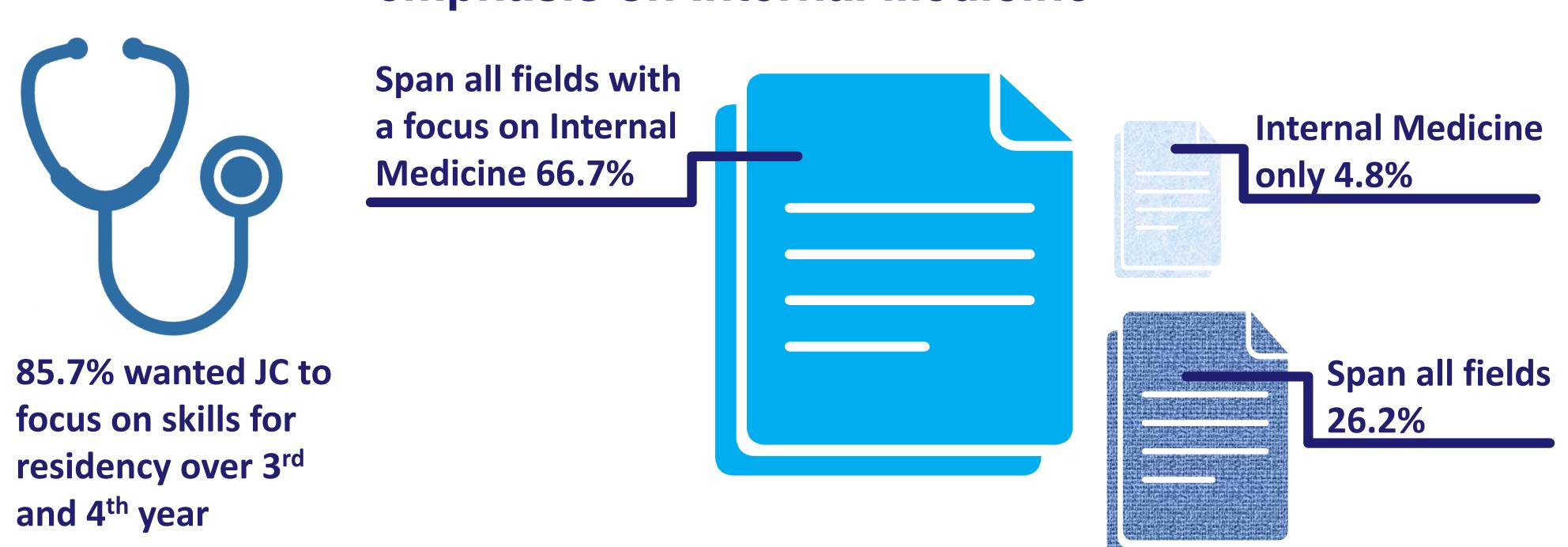
Students were asked to report the extent to which they agreed with the following statements, on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Median and interquartile ranges for the responses to each statement are shown below.

Statement	Median (IQ Range)
There is a lack of exposure to research that underlies clinical decisions	4 (3-4)
There is a lack of training in how to ask clinical research questions	4 (3-4)
There is a lack of training in how to acquire evidence to answer a clinical research question	4 (2-4)
There is a lack of training in how to critique clinical research	4 (3.25-4.75)
There is a lack of training in how to apply clinical research to patient care	4 (3-4)
There is a lack of training in how to present clinical research	4 (3-4.75)

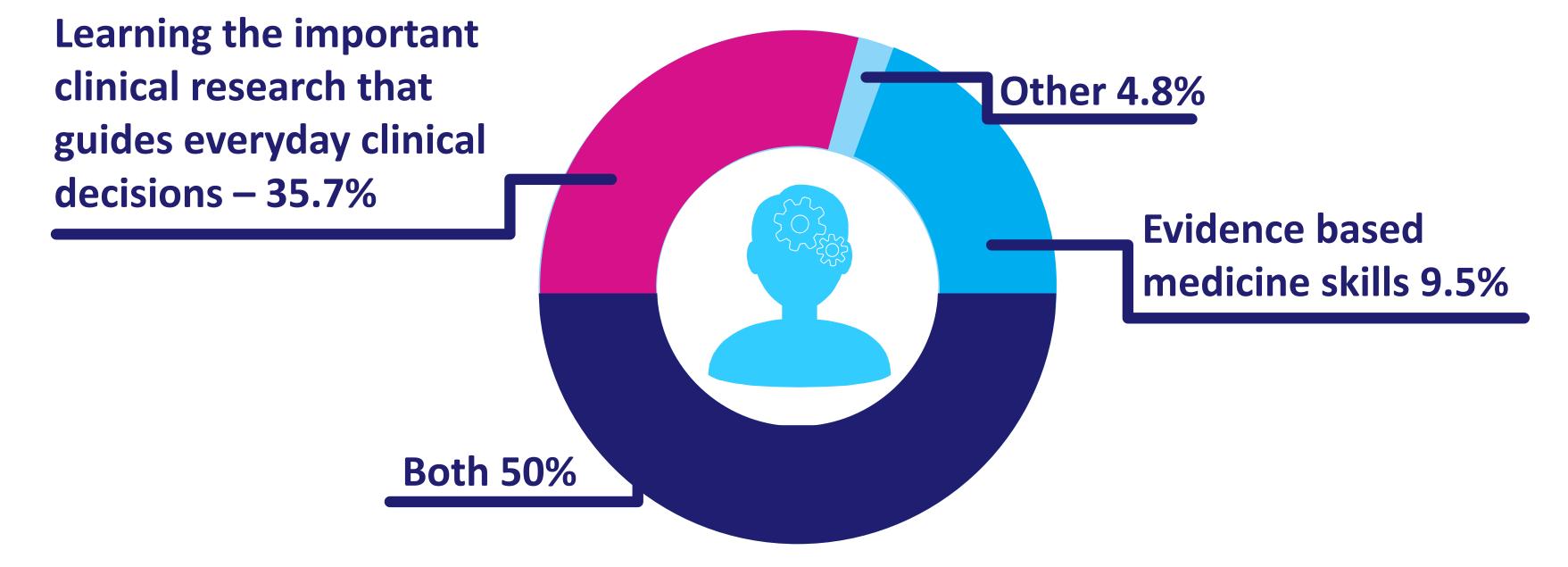
Students were interested in both attending and presenting at JC



Papers Presented at EBM JC should span a variety of topics with an emphasis on Internal Medicine



Students wanted Journal Club to teach both EBM skills and research that drives clinical decision making



Journal Club Logistics

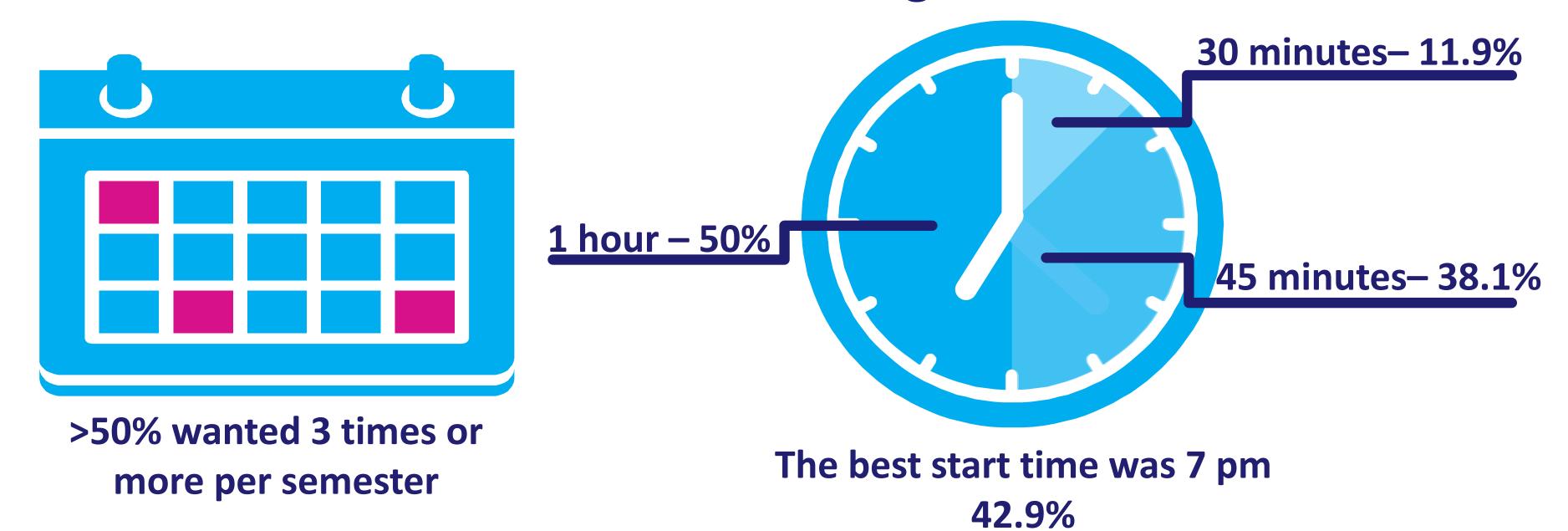


Table 2: Student Interest in Developing EBM Skills.

Students were asked to report the extent to which they agreed with the following statements, on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Median and interquartile ranges for the responses to each statement are shown below.

Statement	Median (IQ Range
Knowledge of research that underlies clinical decisions	4 (4-5)
Ability to ask clinical research questions	5 (3.25-5)
Ability to acquire evidence to answer a clinical research question	4.5 (4-5)
Ability to critique clinical research	4.5 (4-5)
Ability to apply clinical research to patient care	5 (4-5)
Ability to present clinical research	4 (4-5)

Conclusions

- The 2017 needs assessment supports a sentiment among the respondents that there is a lack of EBM exposure in the current medical school curriculum
- There is student interest in attending and participating in an extracurricular EBM JC
- EBM JC curriculum should focus on skills applicable for residency, especially the ability to ask clinical research questions and the ability to apply clinical research to patient care
- Papers discussed in EBM JC should span all fields with a focus on internal medicine

Future Directions

- Since this initial needs assessment, EBM JC has customized its curriculum to support the needs expressed by students
- Students are now allowed to select from a list of "pre-chosen" articles
 which span a variety of fields with a focus on internal medicine that
 have been selected by the residents and attendings as particularly
 relevant to patient care
- Presenters are asked to incorporate EBM skills and PICU format as well as a specific patient as an example
- Based on the logistical results section of the needs assessment, EBM JC is help monthly at 7pm, and has expanded to attendance by medical students of all years
- Assessments are being designed to determine the effectiveness of EBM JC in addressing the needs of students

References

Coomarasamy, A. and K.S. Khan, What is the evidence that postgraduate teaching in evidence based medicine changes anything? A systematic review. BMJ, 2004. **329**(7473): p. 1017. Mohr, N.M., et al., An evidence-based medicine curriculum implemented in journal club improves resident performance on the Fresno test. J Emerg Med, 2015. **48**(2): p. 222-229 e1.



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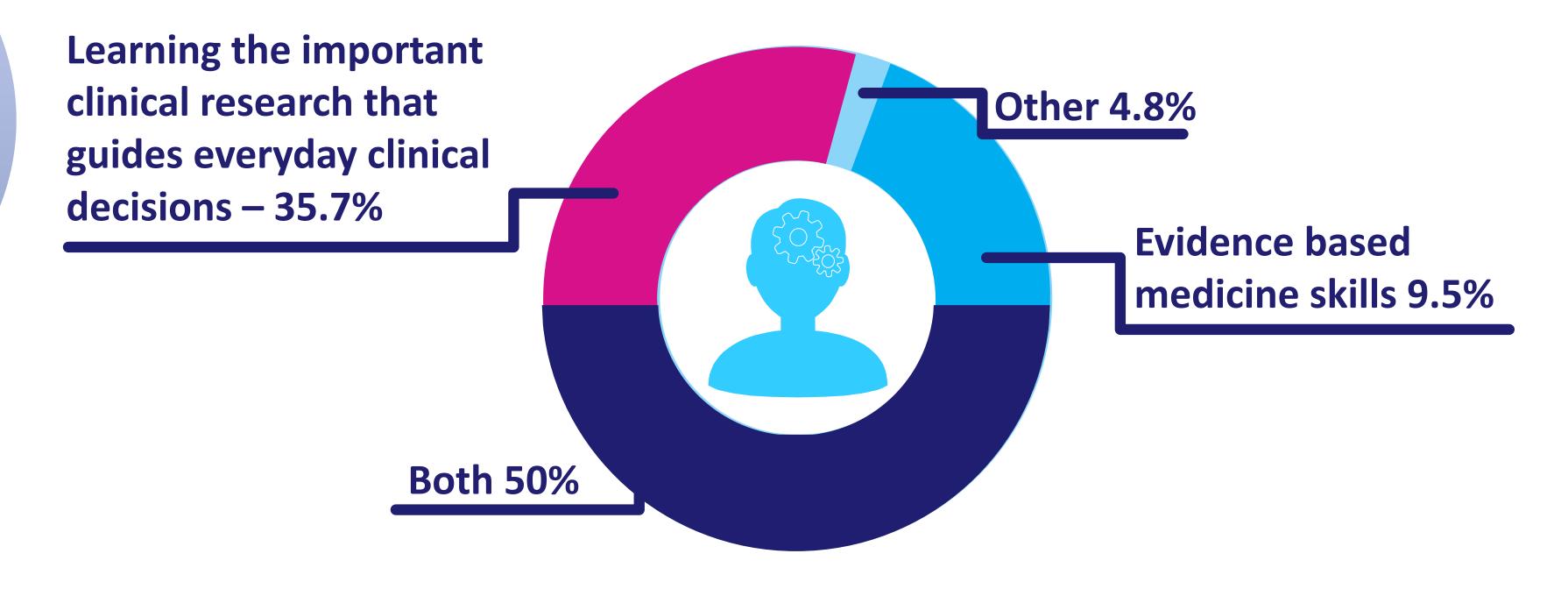
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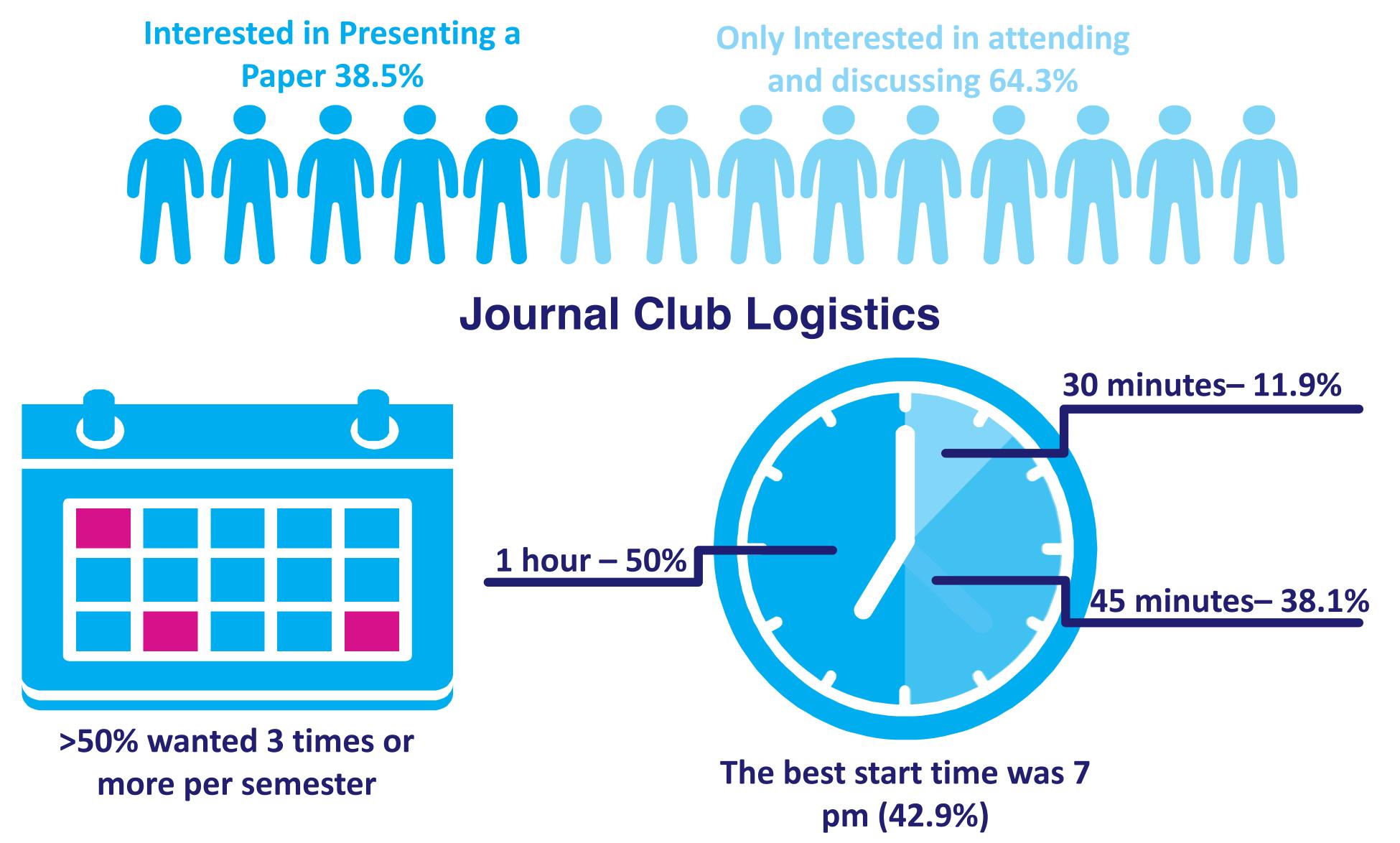
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Table 1:

Students wanted Journal Club to Teach both EBM skills and landmark clinical trials



Students were interested in both attending and presenting at JC



Conclusions

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