

## Journal Club: Facilitator's Guide

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This document, along with the provided student documents, are intended to support facilitators in leading a discussion-focused journal club. There are many ways to facilitate a productive discussion. This document simply provides one set of recommendations.

**Goal:** To provide students with an opportunity to critically engage with journal articles with their peers.

**Estimated Time:** 45 minutes

**Recommended Group Size:** <12 medical students

### **Outcome Objectives:**

1. Students will be able to identify methodological limitations in empirical research.
2. Students will be able to appraise the support provided for arguments made by authors of academic journal articles.
3. Students will be able to relate academic journal articles to medical practice.

### Potential Integration Points

**Course Topics:** Behavioral Science, Biostatistics, Clinical/Translational Research, Doctoring, Evaluation of Health Science Literature, Evidence-Based Medicine, Family Medicine, Health Care Needs of Medically Underserved Populations, Health Care Quality Improvement, Internal Medicine, Health Disparities, Population-Based Medicine, Public Health Issues/Systems, Research Methods

**Physician Competencies Reference Set (PCRS) Domains:** Patient Care, Practice-Based Learning and Improvement, Interpersonal and Communication Skills, Systems-Based Practice, Interprofessional Collaboration

### **Physician Competencies Reference Set (PCRS) Competencies:**

- 1.5 Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgement.
- 2.5 Apply principles of social-behavioral sciences to provision of patient care, including assessment of the impact of psychosocial and cultural influences on health, disease, care-seeking, care compliance, and barriers to and attitudes toward care.
- 2.6 Contribute to the creation, dissemination, application, and translation of new health care knowledge and practices.
- 3.6 Locate, appraise and assimilate evidence from scientific studies related to patients' health problems
- 3.9 Obtain and utilize information about individual patients, populations of patients, or communities from which patients are drawn to improve care.

- 3.10 Continually identify, analyze, and implement new knowledge, guidelines, standards, technologies produces, or services that have been demonstrated to improve outcomes.
- 4.2 Communicate effectively with colleagues within one's profession or specialty, other health professionals, and health related agencies.
- 5.5 Demonstrate sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.
- 7.2 Use the knowledge of one's own role and the roles of other health professionals to appropriately assess and address the health care needs of the patients and populations served.

**Entrustable Professional Activity (EPA):**

7 Form Clinical Questions and Retrieve Evidence to Advance Patient Care.

Background

As physicians, medical students will need to critically evaluate academic journal articles and confidently discuss them with their colleagues and concerned patients. Journal clubs provide an opportunity for medical students to practice these skills. It is easiest for students if each journal club focuses on discussing one journal article in depth. While the conclusions drawn by the authors will be of interest, and likely the focus of the students' attention, the point of this activity is not the students to learn a specific set of "facts" espoused by the authors of the article. Rather, student's time and attention should be spent understanding how the authors reached their conclusions, and weighing the evidence to decide for themselves what can be learned from the article. Additionally, students should treat this as an opportunity to reflect on their own experiences and consider the how the insight they gained from the journal article can impact their practice as physicians.

Role of the Facilitator

As the facilitator, your role is to help students understand details related to the methods, quality of the data, and statistical analyses, while giving the students the space they need to have a critical discussion among themselves. The facilitator should also present the discussion questions from the DIT Journal Club Article Recommendations. The student journal club leaders for the week should come prepared to lead the discussion with a brief summary of the article and discussion questions. The Student Leader Guide encourages the students to follow an outline like the one below as they lead the discussion.

Example Journal Club Session Outline for Research Articles

1. Summarize the topic of the article.
2. Explain why this topic is important.
3. Describe what the authors were looking to do with this study.
4. Summarize the methods used in this study.
5. Summarize the primary findings of the study.
6. Discuss strengths and weaknesses for the study design.

7. Discuss which conclusions are most supported by the presented information.
8. Discuss questions recommended for group discussion of and reflection on the topic (see DIT Journal Club Article Recommendations).

### Preparing to Facilitate

To prepare, read the article with special attention to the methods and results section. It is essential to consider whether the article provides an appropriate test of the study's hypothesis/research question, and whether the authors' conclusions are supported by data in the context of the study's design. If you come across any aspects of the article that are unfamiliar or unclear, research these items or contact experts who may be able to clarify complex aspects of the article. The Student Participant Preparation Guide asks all students participating in the journal club to consider the questions below.

**Note:** Thorough facilitation preparation is important because if you have questions about an aspect of the article, the students will likely have similar questions and look to you for answers.

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#### Research Articles

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##### **Introduction**

- What is the issue this study set out to investigate?
- Why is this issue important?
- What makes this study unique/novel?
- What is the hypothesis/research question this study set out to test/investigate?

##### **Methods**

- Generally, in 1-2 sentences, what did the authors do in this study?
- Do the methods allow for the authors to adequately test their hypothesis/answer their research question?
- What limitations exist based on the choices the authors made with respect to their methods for this study?

##### **Results**

- Do the types of analyses conducted make sense given the study's hypothesis/research question?
- What does the data tell you the study found?

##### **Discussion**

- Does the authors' summary of what was found in the study match your interpretation of what was found based on the data and methods?
- Do the authors adequately address any concerns you have with the design or findings of this study?
- Do you agree with the authors' conclusions about the implications of their work?
- What do the findings of this study mean for you as someone who will eventually be a physician?

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#### Commentaries

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| <ul style="list-style-type: none"> <li>• What is the primary point the author is trying to make?</li> <li>• Does the author provide compelling evidence to support the point being made?</li> <li>• Does the author accurately present the issue?</li> <li>• What assumptions are being made by the author?</li> </ul> | <ul style="list-style-type: none"> <li>• What biases do the author seem to have?</li> <li>• Are there any parts of the author's conclusions or analysis with which you disagree?</li> <li>• Do you feel like this commentary will have any impact on the way you practice medicine?</li> </ul> |
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## Recommendations

- 1. Ensure the overview of the topic and summary of the article is very brief.** Encourage the student leaders to keep this part of the presentation to 5-10 minutes. It should focus generally on what was done, what was found, and why this information is relevant. The important details from journal article should be covered in the context of the discussion.
- 2. Investigate how this article fits with other research related to this topic.** Does this article say anything new or different than what is currently known? UptoDate or other evidence-based point of care resource can be a good resource for understanding how the findings of this article fits with current thinking. The students will benefit from you using your experience and expertise to help place this article in context.
- 3. Draw your own conclusions by looking at the tables and figures presented in the results section.** The conclusions presented by the authors should not be treated as facts, but rather as augments. It is important for you (and the students) to decide whether the data (in the context of the study's methods) supports the authors' arguments.
- 4. Identify the strengths of the article.** It is easy for these discussions to get caught-up focusing exclusively on the weaknesses and limitations of the study. Every study has limitations and weaknesses. These limitations and weaknesses do not necessarily undermine the ability of a research article to make a useful contribution based on its strengths. Prompt the students to think about and discuss these strengths if they do not come up organically in the course of the discussion.
- 5. Ask yourself if anything is missing that you expected to see.** Review the study's hypothesis/research question and think through how you would design a study and analyze the data to test it. Then as you read the article, try to predict what information is coming next. Doing these two things will highlight any information that the authors left out that you might want/need, and it will give you opportunities to think through the potential reasons behind any difference between what you would have done and what the researchers did. It is always helpful to ask the students to talk about what they would have liked to see from this study in terms of methods and analyses, or what they would do to design a better study.
- 6. Be prepared with visual aids.** It can be helpful to have PowerPoint slides or handouts with the tables/figures from the article prepared in case they become part of the discussion. Although student leaders may supply these, it can be helpful to have handouts of key measures, tables, or figures prepared for parts of the article you want to make sure are discussed.
- 7. Review any supplemental materials.** Supplemental materials published with the article can provide answers to key methodological and data analysis questions. Usually these materials are available through the journal's online portal.
- 8. Reflect on the conclusions drawn by the authors.** Present the discussion questions from the DIT Journal Article Recommendations. These will help guide a reflective discussion so that students can consider what the content of the article adds to their knowledge and understanding of that topic.