



Journal Clubs: 2. Why and how to run them and how to publish them

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10.1136/ebmed-2017-110861

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Journal clubs have many functions, including the provision of a forum for developing skills in critical appraisal, an essential part of being a competent clinician.

From early on, journal clubs reported their proceedings in academic journals. The *Zoological Journal Club of Michigan*, for example, regularly reported its activities in the journal *Science* (see [figure 1](#)). [Table 1](#) lists a selection of other journals that publish journal club articles, showing the wide range of topics covered. Modern methods of conducting journal clubs include the use of online media to encourage interactive discussion,¹ including blogs,² twitter,³ and virtual journal clubs.⁴

It is therefore appropriate that *Evidence-Based Medicine* (EBM) should feature a regular journal club report.

In order to find out how others run journal clubs and the effects that they have, I searched PubMed for articles on journal clubs, using the search term 'journal[ti] & (club[ti] OR clubs[ti])' (1699 hits) and found three types of articles: articles in which authors described a paper

that they had discussed at a journal club or thought would be suitable material for a journal club; studies of the effects of running journal clubs; and reviews of various sorts.

I found three systematic reviews. One recommended the journal club as a tool for assessing practice-based competencies that might be difficult to assess by other means⁵; one reported that journal clubs improve knowledge and critical appraisal skills but that there was no evidence on translation of evidence from journal clubs into clinical practice⁶; and one reported that journal clubs seemed to be the preferred way of teaching critical appraisal skills but that it was not clear which elements were most important for learning.⁷

I have synthesized much of this information and have distilled what I consider to be the important points that arise from the formal studies and reviews and describe the objectives of a journal club and how to run one. I also give guidance on the preparation of journal club

Table 1 Some journals that publish articles under the heading 'Journal Club'

Journal	Example (PMID)	Notes
<i>American Journal of Infection Control</i>	28768589	Brief summaries of papers from the journal; recent topics include: catheter-associated urinary tract infections; hand hygiene; social media; inappropriate urinary catheter reinsertion
<i>American Journal of Roentgenology</i>	28796544	Abstracts of papers from the journal; recent topics include: thymic epithelial tumours; electronic medical records; contrast reactions; four-dimensional flow MRI
<i>Annals of Emergency Medicine</i>	29056210	Aims to help readers discuss papers at their own journal clubs; uses papers published in the journal, which 'serve the mission of covering the clinical epidemiology curriculum'; poses questions about the article for use at journal clubs and answers the questions in a later issue
<i>Annals of Internal Medicine</i>		ACP Journal Club: prepares informative abstracts to help readers verify whether the conclusions are likely to be reliable and applicable, with expert commentaries; recent topics include: arthroscopic knee surgery; varenicline; breast cancer screening; preparation for colonoscopy
<i>Breathe (Sheff)</i>	28289445	Interactive discussion of papers in different journals; recently started
<i>Chronic Obstructive Pulmonary Diseases</i>	28848936	Reviews groups of articles with a common theme; eg, exacerbations of COPD; inhaled corticosteroids; oxygen therapy; phosphodiesterase type 4 inhibitors
<i>Journal of Parenteral and Enteral Nutrition</i>	29049015	Critically discusses papers from a range of sources; recent topics include: dealing with dropouts; small trials with dramatic findings; study design; superiority, non-inferiority and equivalence; systematic reviews and strength of evidence; composite end points; duplicate publication
<i>Journal of Pediatric Urology</i>	28237508	Descriptions of papers from the journal with discussions on twitter; recently started
<i>Journal of the American Academy of Dermatology</i>	28411769	Online discussion forum linked to CME articles; recent topics include: glucocorticoid-induced adverse reactions; psoriasis; non-melanoma skin cancer; psychocutaneous disease
<i>Lancet Oncology</i>	28271863	Brief summaries of papers from the journal; recently started
<i>Neurology</i>	28808174	Critically discusses papers from the journal; recent topics include: infections after acute spinal cord injury; outcomes after intracerebral haemorrhage; depression; amyotrophic lateral sclerosis
<i>Neurosurgery</i>	26779786	Critically discusses papers from the journal; recent topics include: temporal lobe epilepsy; screw fixation; outpatient surgery; ganglioglioma
<i>Zeitschrift für Gerontologie und Geriatrie</i>	28852779	Brief German language abstracts of papers from a wide range of journals

COPD, chronic obstructive pulmonary disease.

SCIENCE

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FRIDAY, DECEMBER 7, 1900.

THE HISTORY OF THE NEOTROPICAL REGION.

CONTENTS:

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A History of the Development of the Quantitative Study of Variation: PROFESSOR CHAS. B. DAYENPORE 864

Flora Geography of North America.—Composition of the Rocky Mountain Flora: DR. P. A. HYDRBERG 870

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Practical Results obtained from the Study of Earthquakes: PROFESSOR JOHN MILNE 891

Scientific Notes and News 892

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IN No. 276 of SCIENCE, April, 1900, Dr. Henry F. Osborn published an article on the 'Geological and Faunal Relations of Europe and America during the Tertiary Period,' to which I may here refer, as it may be useful for science to discuss the different opinions to which our study has led us.

It is singular that Mr. Osborn has no knowledge at all of the numerous papers published by the writer on the history of the neotropical fauna, and consequently it is necessary to say at first some words on these papers, and the new discoveries and ideas published in them. Referring here only to those of my publications in which the geological and zoogeographical relations of South America were fully discussed, I name the following:

1. 'Die Geographische Verbreitung der Flussmuscheln.' *Das Ausland*, Stuttgart, 1890, Nos. 48-49; and translated 'The Geographical Distribution of the Freshwater Mussels.' *The New Zealand Journal of Science*, Vol. I., Dunedin, 1891, pp. 151-154.
2. 'Ueber die Beziehungen der chilenischen und sudbrasilianischen Süsswasserfauna.' *Verhandlungen des deutschen wissenschaftlichen Vereines zu Santiago*, Vol. II., 1891, p. 142-19.
3. 'Ueber die alten Beziehungen zwischen Neuseeland und Suedamerika.' *Ausland*, Stuttgart, 1891, No. 18. Translated, 'On

ing to give their name and a piece of information about themselves (eg, a movie they have recently seen).

7. Discuss up to three papers from peer-reviewed journals; develop a theme each time; occasionally include books of interest.
8. Split presentation and discussion times 50/50.
9. Try to choose papers that you think may influence clinical practice and discuss why.
10. Disseminate the chosen articles in advance, with questions that might be asked; the leader should bring spare copies to the meeting.
11. Keep notes and conduct regular audits (eg, yearly); give feedback on later developments; link it to a Xmas quiz.
12. Welcome guest speakers from time to time to add expert comment.
13. Provide free enticing refreshments; have a rota for making the tea/coffee.
14. Use your imagination to make it fun.
15. Publish your experience.
16. Adapt these suggestions to suit your own circumstances.

Ten tips on how to prepare a journal club article for EBM

1. The article should have proceeded from an actual journal club.
2. The paper discussed need not have been published in *EBM*.
3. At the start, give the full reference (Vancouver style) of the article that you have discussed.
4. The following framework, adapted from that originally suggested by Riegelman⁸ may be useful: aims, methods, results, interpretation, implications for practice, and further research.
5. Say what the purpose of the study was.
6. Summarise the important points in the article, paying particular attention to the methods that were used.
7. Briefly describe the main results.
8. Highlight the strengths and weaknesses; how could the study have been improved? did the authors achieve what they set out to achieve?
9. Describe the implications of the results and whether you think they may or may not influence practice beneficially or adversely.
10. If relevant, say what further research might be carried out.

Competing interests JKA is an associate editor for *EBM*.

Provenance and peer review Commissioned; internally peer reviewed.

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References

1. Chan TM, Thoma B, Radecki R, et al. Ten steps for setting up an online journal club. *J Contin Educ Health Prof* 2015;35:148-54.

Figure 1 The contents page of *Science* for Friday 7 December 1900, listing the proceedings of the *Zoological Journal Club of the University of Michigan*.

reports that we hope readers will submit for publication. We look forward to hearing from you.

Five reasons for running a journal club

1. To highlight new findings.
2. To teach practitioners how to search for interesting articles representing the best evidence to inform clinical practice.
3. To encourage practitioners to read and appraise publications critically and give them the ability to do so.
4. To encourage practitioners to do applied clinical research and to show them how.
5. To improve debating skills, demonstrate leadership skills, and aid peer mentorship.

Sixteen suggestions on how to run a journal club

1. The members of the club should on the whole have shared or complementary interests, including statisticians, but do not discourage multidisciplinary, if available; involve everyone, from students down to professors.
2. Run the club regularly at the same time on the same day of the week, so that it becomes a fixture.
3. Have at least one designated skilled leader who regularly participates in the club.
4. Ideally, make attendance mandatory and keep a record.
5. Ensure that the meetings start and end on time.
6. Encourage communality; this could be done, for example, by asking everyone at the start of each meet-

2. Genes N, Parekh S. Bringing journal club to the bedside in the form of a critical appraisal blog. *J Emerg Med* 2010;**39**:504–5.
3. Topf JM, Sparks MA, Phelan PJ, *et al*. The evolution of the journal club: from Osler to Twitter. *Am J Kidney Dis* 2017;**69**:827–36.
4. Chetlen AL, Dell CM, Solberg AO, *et al*. Another time, another space: the evolution of the virtual journal club. *Acad Radiol* 2017;**24**:273–585.
5. Lee AG, Boldt HC, Golnik KC, *et al*. Using the journal club to teach and assess competence in practice-based learning and improvement: a literature review and recommendation for implementation. *Surv Ophthalmol* 2005;**50**:542–8.
6. Deenadayalan Y, Grimmer-Somers K, Prior M, *et al*. How to run an effective journal club: a systematic review. *J Eval Clin Pract* 2008;**14**:898–911.
7. Ahmadi N, McKenzie ME, Maclean A, *et al*. Evidence-based reviews in surgery steering group. Teaching evidence based medicine to surgery residents—is journal club the best format? A systematic review of the literature. *J Surg Educ* 2012;**69**:91–100.
8. Riegelman RK. *Studying a study and testing a test*. Philadelphia: Lippincott Williams & Wilkins, 2005.



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Evid Based Med 2017 22: 232-234 originally published online November 17, 2017

doi: 10.1136/ebmed-2017-110861

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