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

Jeffrey K Aronson

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, including blogs, twitter, and virtual journal clubs.

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 means; 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 practice; 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.

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 articles.

<table>
<thead>
<tr>
<th>Journal</th>
<th>Example (PMID)</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>American Journal of Infection Control</td>
<td>28768589</td>
<td>Brief summaries of papers from the journal; recent topics include: catheter-associated urinary tract infections; hand hygiene; social media; inappropriate urinary catheter reinsertion</td>
</tr>
<tr>
<td>American Journal of Roentgenology</td>
<td>28796544</td>
<td>Abstracts of papers from the journal; recent topics include: thymic epithelial tumours; electronic medical records; contrast reactions; four-dimensional flow MRI</td>
</tr>
<tr>
<td>Annals of Emergency Medicine</td>
<td>29056210</td>
<td>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</td>
</tr>
<tr>
<td>Annals of Internal Medicine</td>
<td></td>
<td>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</td>
</tr>
<tr>
<td>Breathe (Sheff)</td>
<td>28289446</td>
<td>Interactive discussion of papers in different journals; recently started</td>
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<tr>
<td>Chronic Obstructive Pulmonary Diseases</td>
<td>28848936</td>
<td>Reviews groups of articles with a common theme; eg, exacerbations of COPD; inhaled corticosteroids; oxygen therapy; phosphodiesterase type 4 inhibitors</td>
</tr>
<tr>
<td>Journal of Parenteral and Enteral Nutrition</td>
<td>29049015</td>
<td>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</td>
</tr>
<tr>
<td>Journal of Pediatric Urology</td>
<td>28237508</td>
<td>Descriptions of papers from the journal with discussions on twitter; recently started</td>
</tr>
<tr>
<td>Journal of the American Academy of Dermatology</td>
<td>28411769</td>
<td>Online discussion forum linked to CME articles; recent topics include: glucocorticoid-induced adverse reactions; psoriasis; non-melanoma skin cancer; psychocutaneous disease</td>
</tr>
<tr>
<td>Lancet Oncology</td>
<td>28271863</td>
<td>Brief summaries of papers from the journal; recently started</td>
</tr>
<tr>
<td>Neurology</td>
<td>28808174</td>
<td>Critically discusses papers from the journal; recent topics include: infections after acute spinal cord injury; outcomes after intracerebral haemorrhage; depression; amyotrophic lateral sclerosis</td>
</tr>
<tr>
<td>Neurosurgery</td>
<td>26779786</td>
<td>Critically discusses papers from the journal; recent topics include: temporal lobe epilepsy; screw fixation; outpatient surgery; ganglioglioma</td>
</tr>
<tr>
<td>Zeitschrift für Gerontologie und Geriatrie</td>
<td>28852779</td>
<td>Brief German language abstracts of papers from a wide range of journals</td>
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</table>

COPD, chronic obstructive pulmonary disease.
Journal club 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 multidisciplinarity, 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 community; this could be done, for example, by asking everyone at the start of each meeting 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.

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References
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