



## ESSENTIAL NOTES

# Establishing and sustaining an effective journal club

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A journal club is a group that meets regularly to review and critique scientific literature. It is thought that Sir William Osler set up the first discussion-based healthcare journal club at McGill University in 1875, after which he encouraged attendees to apply their updated knowledge in practice.<sup>1</sup>

There is debate over whether the main goal of a journal club should be for attendees to keep abreast of the literature, or to develop critical appraisal skills.<sup>2,3</sup> Both are essential in clinical medicine, and a journal club may incorporate both or vary its aims over time. Goals may also include the acquisition of other transferrable skills such as presentation and debating skills.

Features associated with a successful journal club (i.e. one that is well attended and sustained over time) include a high degree of interest from participants and the ability to acquire critical appraisal skills. Other important considerations are to ensure that selected articles are relevant and interesting, thereby encouraging discussion of complex and controversial issues.<sup>4</sup> In this article, we suggest how to establish and run an effective journal club, both in-person and virtual, and direct

readers to critical appraisal tools that may be used to maximise the educational benefits.

There is no 'gold standard' for how to conduct a journal club.<sup>5–7</sup> We therefore draw on published evidence in combination our own experience of running journal clubs, particularly the *Self-Isolating Virtual Education (SAVEd) Virtual Journal Club*. This was established in the North West School of Anaesthesia during the COVID-19 pandemic to allow trainee anaesthetists, including those who were unable to attend the clinical workplace because they were 'shielding' or self-isolating, to continue to participate in a journal club.<sup>8</sup>

## Logistics

It is useful to define leadership and administrative roles at the outset and distribute responsibilities between colleagues. A typical model comprises a trainee lead supported by a senior colleague who should support the presenters and trainee lead, and who may offer specialist expertise (e.g. in research methods or areas of clinical practice). Tasks include promotion and publicising, scheduling, arranging rooms, selecting and sharing papers, allocating presenters and facilitating discussion.

Schedule the journal club to maximise participation and minimise exclusion. Although specifying a regular day and time integrates the journal club into departmental routine, it can prevent colleagues from attending if they have commitments at fixed times. Likewise, fit the journal club around essential clinical duties, and release participants from clinical work to attend if possible. Relatively short meetings on alternating days appear to be effective, and attendance can be maximised by online scheduling tools.

Register participants' attendance and make the details available for attendees' records. Try to ensure that attendees have shared interests where you can. Multidisciplinary sessions can offer richer and more valuable discussions, and the

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shared educational experience allows for common understandings that improve relationships and collaborations at the bedside. For example, colleagues from anaesthesia, geriatric medicine, orthopaedic surgery, nursing and physiotherapy could attend a journal club on a paper concerning the timing of hip fracture surgery.

## Journal club conduct

Make expectations and responsibilities clear. We have found it effective to assign a 'presenter' for each journal club, who should read, critique and prepare a short presentation on a paper, supported by the senior or trainee journal club lead who may offer advice such as suggestions for critique and explanation of research methods. This is followed by a discussion facilitated by the journal club lead. If you expect attendees to read the paper in advance, make them aware of this, and share the manuscript beforehand, where copyright rules permit.

Either the presenter or the journal club lead can select the articles for discussion. Although any paper may have an educational component, we advise the selection of primary research or systematic reviews that have been published recently, are relevant to clinical practice and have clear potential for discussion amongst colleagues, for example relating to study design or clinical implications.

Format the discussion based on the principles of adult learning. These include promoting interest by relating the discussion to immediate work and personal goals, by focusing on patient or situation-based problems, using multiple teaching formats (i.e. individual reading, presentation, discussion), and by facilitating active participation and feedback.<sup>9</sup>

A journal club can help individuals to develop their critical appraisal skills. Several critical appraisal tools and reporting guidelines are available as checklists (Table 1). These provide a useful guide; they can be used to structure presentations and also provide prompts for key questions such as 'will the results help locally?' Structured appraisal tools can increase attendees' satisfaction and the perceived value of a journal club.<sup>10</sup>

Ensure that you evaluate the journal club through written and quantitative feedback from attendees. Feedback can focus on both the journal club in general, and individual presentations in particular. The former should be used to

optimise the conduct and format of the journal club, and the latter can be used to focus participants' reflections (e.g. on how they will apply their learning in practice), and summarised for use by the presenter, for example in their annual appraisals.

## Online journal clubs

Face-to-face journal clubs have a long history.<sup>1</sup> However, online journal clubs have increased as a consequence of the restrictions imposed by the COVID-19 pandemic. This approach permits attendance from work or home (thereby potentially increasing attendance), ensures social distancing and allows recording of the sessions. Recording the sessions allows participation via asynchronous online discussion and access for colleagues who are unable to attend 'live'.<sup>11,12</sup>

You can operate an online journal club in a similar fashion to in-person events. However, there are some particular considerations related to the use of information technology (IT):

- Assign a chairperson and a facilitator, to avoid one person having to manage the IT aspects (screen sharing, recording etc.) at the same time as presenting.
- Set a time when attendees can access a computer. Evenings may be most suitable, depending on hospital IT infrastructure.
- Promotion (e.g. via social media) is important to encourage attendance at online journal clubs.
- Use a videoconferencing system that is easy to use, free for attendees to access and allows the ability to record. Make log-in details clear.
- Explain videoconferencing etiquette at beginning of each session. For example ensure that attendees mute their microphones during the presentation and keep their cameras on. Effective chairing of the discussion is more important than in the face-to-face setting.<sup>12</sup>
- If recording the session, specify when the recording will start and finish, so that attendees can turn off their cameras, if preferred.
- Make time after the recording has finished for informal or social discussion.
- Use an online survey platform for feedback; quick response (QR) code links allow rapid access via mobile phone.
- Be prepared to change the format in response to feedback from attendees and facilitators.<sup>13</sup>

Table 1 Free-to-access checklists to guide critical appraisal of the scientific literature.

Resource	Description	Access
Critical Appraisal Skills Programme	Checklists for appraising RCTs, systemic reviews, qualitative, cohort, case control and diagnostic studies	<a href="https://casp-uk.net/casp-tools-checklists/">https://casp-uk.net/casp-tools-checklists/</a>
BMJ Best Practice evidence-based medicine toolkit	Checklists for appraising two-armed RCTs, multiple-armed RCTs, diagnostic test studies, systematic reviews and multiple systematic reviews on the same question	<a href="https://bestpractice.bmj.com/info/toolkit/ebm-toolbox/critical-appraisal-checklists/">https://bestpractice.bmj.com/info/toolkit/ebm-toolbox/critical-appraisal-checklists/</a>
Centre for Evidence-Based Medicine critical appraisal tools	Checklists for appraising systematic reviews, diagnostic and prognostic studies, RCTs, qualitative studies and reviews based on individual participant data	<a href="https://www.cebm.ox.ac.uk/resources/ebm-tools/critical-appraisal-tools">https://www.cebm.ox.ac.uk/resources/ebm-tools/critical-appraisal-tools</a>
Equator Network library for health research reporting	Reporting checklists for numerous study types, including RCTs, observational studies, systematic reviews, diagnostic and prognostic studies, qualitative research and quality improvement studies	<a href="https://www.equator-network.org">https://www.equator-network.org</a>

## Conclusions

Journal clubs provide the opportunity for attendees to maintain their knowledge of current literature and develop skills in evidence-based medicine. The successful running of a journal club involves a learner-centred approach to organisation, scheduling and delivery, and appropriate paper selection and support in undertaking critical appraisal; checklists are a useful resource for this purpose. Virtual journal clubs offer a flexible approach, but warrant consideration of the specific challenges and benefits of online technologies.

## Declaration of interests

The authors declare that they have no conflicts of interest.

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