

# Medical Education

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## Making a postgraduate journal club an effective learning opportunity: Experience from the Centre for Community Medicine, All India Institute of Medical Sciences, New Delhi

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### INTRODUCTION

A journal club (JC) is defined as a group of individuals who meet regularly to critically discuss the applicability of current peer-reviewed articles published in medical journals.<sup>1</sup> The memoirs of Sir James Paget, a surgeon at St Bartholomew's Hospital, London, UK (1835–54), contain the earliest mention of a JC. Sir Paget described 'a kind of club in a small room over a baker's shop near the hospital gate where we could sit and read journals and play cards'.<sup>2</sup> There is evidence of the existence of the first formal JC in 1875, when William Osler of McGill University, Montréal, Canada found a way of making expensive periodicals affordable by purchasing expensive journals with fellow students at a group rate.<sup>3</sup>

### OBJECTIVES OF A JC

JCs have been advocated as a bridge between research and practice. A JC is expected to provide a virtual experience of research design, which is taught in the classroom environment. An ideal JC could stimulate the sharing of new knowledge in an area through collective learning, develop critical appraisal skills, familiarize students with advanced biostatistical techniques, stimulate reading of other relevant articles and help understand the relevance of the study findings in the local context. It should also help improve the presentation skills of students.

However, it has been felt that the objectives of a JC are not achieved completely. The common reasons for the languishing of JCs or, in extreme circumstances, their discontinuation appear to be lack of time, inadequate preparation, and lack of goals, interest or participation.<sup>4,5</sup> We describe a successful model of a JC being followed for postgraduate students at the Centre for Community Medicine (CCM), All India Institute of Medical Sciences (AIIMS), New Delhi, India.

### TIME-LINE OF THE PROCESS

The JC is an essential component of the postgraduate training programme at the CCM. It is scheduled for 2–5 p.m. on Thursdays. The teaching roster for a semester is prepared 6 months in advance. Each presenter (student) has a faculty preceptor and the preceptors are named in the roster. Two months before the scheduled date of presentation, the student is required to submit shortlisted articles for the JC to the preceptor. One month prior to

the presentation date, hard copies of the article are distributed to all faculty members and students, so that they have adequate time to read and synthesize their thoughts. The presentation slides are finalized at least 2 weeks in advance in consultation with the faculty preceptor. The final set of slides is shared through e-mail a week before the scheduled date. This schedule is sacrosanct and only in rare circumstances are alterations or changes permitted.

### Allocation of preceptor

One faculty member from CCM is assigned the task of being the preceptor for one presenter. One or two additional preceptors from the department of biostatistics are also invited. An effort is made to assign a new faculty preceptor every semester so as to make sure that the student gets an opportunity to work under the supervision of different faculty members of the department.

### SELECTION OF ARTICLE

This is the most crucial step in the entire process. The barriers to the successful selection of an appropriate article for review include time constraints and confusion among the students, given the plethora of information available. There are several steps in deciding which article to present in the JC. These include choosing an appropriate topic, searching journals to find relevant articles, selecting the article and finally, evaluating whether it is a good article for the JC. We expect that the level of difficulty of the article should be in keeping with the increasing complexity of the postgraduate curriculum. Accordingly, the postgraduate presents articles which gradually progress from easy to more complex research designs, and also, those incorporating advanced statistical concepts. Thus, a postgraduate would initially select simple prevalence studies and progress to analytical study designs, such as case-control and cohort studies, experimental study designs, including randomized controlled trials, diagnostic criterion studies, meta-analysis, economic evaluation and programme evaluation. The last mentioned are especially relevant to the practice of public health and give students an understanding of the complexity of undertaking evaluations in real-world scenarios.

The selection of the journal article is a lengthy process, e.g. in one instance, in which the objective was to present an article on a meta-analysis, the student sorted and retrieved a total of 86 articles, read the abstracts of 31 articles and sent 7 articles to the faculty preceptor before finally selecting one. This process is also influenced by the expertise and research interest of the faculty preceptor. The selection process also takes into account the source of publication of the article, the potential relevance of the topic in the Indian context, and the possibility of subsequently writing a

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critique of the paper and publishing it in a peer-reviewed, indexed journal. The search of the literature covers reputed specialty journals, non-specialty journals and secondary literature, using PubMed. The process of selection is guided by mainly two factors: elimination and analysis. While reviewing potential articles, the student usually starts with an interesting title, and then reads the abstract. This is followed by a review of the tables, graphs and figures so as to search for an answer to the questions:

- Does this article teach a public health topic of relevance?
- Does it teach a specific research design?
- Does it teach statistical skills?
- Does it keep up with the current literature?

If the answer to any of these is no, the presenter selects another article. If the answer to all the questions is yes, the presenter begins reading the methods and the entire article to subjectively assess whether the article has enough material to teach the relevant critical appraisal concepts.

#### PRESENTATION OF THE ARTICLE

The presentation is made in a designated seminar room, using slides and an overhead projector. The seating capacity of the seminar room is adequate to comfortably accommodate the existing strength of the faculty and students. One of the salient features of the JC in the CCM is that in the first slide, the student must present his/her argument as to why the article was selected for presentation. The reasons might include (i) the article being relevant in accordance with the student's semester; (ii) it being a topic of interest to the student; (iii) its relevance to his/her ongoing thesis; (iv) the topic being a contemporary one; or (v) the article having a bearing on an ongoing public health debate. The aim is to strengthen the students' reasoning skills with respect to their actions. This is followed by the presentation of an outline, introduction to the topic, discussion on the methodology, description of the results, and presentation of the discussion, conclusions, recommendations and limitations. The last section consists of a detailed structured deliberation focusing on a critical appraisal of the study.

#### *Critical appraisal of the articles*

An ability to perform a high-standard critical appraisal of a study is the first step towards the practice of evidence-based medicine. The process of critically appraising studies in our JC is rigorous and proceeds step by step, as per the standard guidelines. For critical appraisal of cross-sectional, case-control and cohort studies, the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines are used,<sup>6</sup> and for randomized controlled trials, the updated guidelines on Consolidated Standards of Reporting Trials (CONSORT) are used.<sup>7</sup> The Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA statement) are used for presentations on systematic reviews and meta-analyses.<sup>8</sup> The latter is an advanced version of the Quality of Reporting of Meta-analysis (QUOROM) statement. The use of standard guidelines for critical appraisal ensures quality assessment of individual studies, and guards against subjective biases while providing objective and uniform criteria. It also creates a platform for other students to participate and put forward their views.

#### QUESTION AND ANSWER SESSION

There are set guidelines for eliciting questions during the presentations. Interruptions are allowed only for critical clarifications. Questions are to be answered by the presenter,

followed by the seniormost batch of students, and then the batch of students next in seniority. Unresolved questions are to be answered by the presenter by e-mail. We are planning a new initiative in which the entire discussion that takes place in the JC will be documented so as to improve the students' skills in making summary reports. One of the residents from the junior batches will be designated the rapporteur.

#### JC SESSIONS

The session of the JC in the CCM lasts 3 hours to ensure that it is not perfunctory. It is mandatory for all faculty members and residents, including PhD scholars, to attend the sessions. At present, PhD scholars and non-academic junior residents are excused from making JC presentations. However, we are re-examining whether PhD scholars should also make presentations in the area of their research. During presentations, snacks and tea are served.

#### FACTORS ASSOCIATED WITH AN EFFECTIVE JC

Multiple factors have been reported<sup>9</sup> to be associated with the effectiveness of a JC. These include: (i) explicit written learning objectives; (ii) a designated club leader; (iii) mandatory attendance; (iv) formal teaching of critical appraisal skills; (v) regular attendance by the faculty; (vi) high value accorded to the JC by the programme director or head; (vii) smaller residency programme (12 or less residents); (viii) incorporation of adult learning principles; (ix) provision of snacks/tea;<sup>10,11</sup> and (x) the use of a structured checklist for review of the article. We are addressing all these factors in our model of JC presentation.

JC formats vary, given the diverse educational settings and specialty needs. As reviewed elsewhere, there is no ideal format for JCs; it depends<sup>11</sup> on the goals of the JC, the parameters used to define success and the resources available. Despite the diversity, to meet the overall teaching goal, the functioning of a JC should be guided by certain clearly stated major objectives. These would include the teaching of aspects of critical appraisal, statistical techniques, study design and clinical, laboratory or public health practice, as the case may be. It is important to encourage the use of a standard method for the selection of the JC article to be presented, as also for the statement of the reason for the selection of the article. The use of a structured format to review the literature would improve students' understanding of concepts. Dedicated time slots should be maintained.

#### CONCLUSION

Students who present often gain useful experience and learn to appreciate the value of critically appraising a published article. A measure of success of a JC in a department curriculum is that the students become more analytical and refrain from accepting the conclusions of published articles at face value. They are more careful while writing their own research proposals and in the future, will become better informed peer reviewers. The skill of critical appraisal and their ability to clearly articulate their views becomes an asset when they become faculty members later—one of the mandates of AIIMS. Making presentations to an audience develops their presentation skills, which will stand them in good stead when they become teachers. The CCM encourages postgraduates to write critiques of papers in peer-reviewed indexed journals. Many postgraduates have been successful in this endeavour. Thus, the possibility of publishing while pursuing one's residency could be used as a powerful motivating tool for a good-quality JC.

## RECOMMENDATIONS

On the basis of our experience of the JC in the CCM, we recommend that every department periodically reassess how well the JC is functioning. An important indicator to start with could be to assess the number of times a session of the JC has been cancelled in the past 6 months. A discussion among the faculty members about the reasons for the cancellation of a session might be helpful in gauging the value accorded to a JC. We strongly believe that to enhance the value of a JC, it is important to fix a day and a time for its sessions, and to make it compulsory for all faculty members to attend the session. Our experience also shows that fixing a schedule well in advance (at the start of the semester), assigning a faculty preceptor to each student, using certain guidelines for the selection of articles and having a set standard for presentation contribute to the success of the JC. A department should choose the minimum number of presentations that must be presented by postgraduates during their three years of training.

## REFERENCES

- 1 Kleinpell RM. Rediscovering the value of the journal club. *Am J Crit Care* 2002;**11**:412-14.
- 2 Cave MT, Clandinin DJ. Revisiting the journal club. *Med Teach* 2007;**29**:365-70.
- 3 Akhund S, Kadir MM. Do community medicine residency trainees learn through journal club? An experience from a developing country. *BMC Med Educ* 2006;**6**:43.
- 4 Heiligman RM, Wollitzer AO. A survey of journal clubs in U.S. family practice residencies. *J Med Educ* 1987;**62**:928-31.
- 5 Mattingly D. Proceedings of the conference on the postgraduate medical centre journal clubs. *Postgrad Med J* 1966;**42**:120-2.
- 6 von Elm E, Altman DG, Egger M, Pocock SJ, Gøtzsche PC, Vandenbroucke JP, STROBE Initiative. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: Guidelines for reporting observational studies. *Ann Intern Med* 2007;**147**:573-7.
- 7 Schulz KF, Altman DG, Moher D, CONSORT Group. CONSORT 2010 statement: Updated guidelines for reporting parallel group randomized trials. *Ann Intern Med* 2010;**152**:726-32.
- 8 Moher D, Liberati A, Tetzlaff J, Altman DG, PRISMA Group. Preferred reporting items for systematic reviews and meta-analyses: The PRISMA Statement. *PLoS Med* 2009;**6**:e1000097.
- 9 Akhund S, Kadir MM. Do community medicine residency trainees learn through journal club? An experience from a developing country. *BMC Med Educ* 2006;**6**:43.
- 10 Sidorov J. How are internal medicine residency journal clubs organized, and what makes them successful? *Arch Intern Med* 1995;**155**:1193-7.
- 11 Alguire PC. A review of journal clubs in postgraduate medical education. *J Gen Intern Med* 1998;**13**:347-53.

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