Jottings …

D o you run a journal club? A helpful insight from someone at our recently finished 3 day EBM workshop in Oxford was that many journal clubs are boring because the articles are quickly trashed as poor research and nothing changes. Since only 1 in 20 articles passes the EBM journal's validity criteria, this is likely to occur 19 out of 20 times for journal articles that simply look "interesting." So for journal clubs you might like to consider either articles from EBM or at least make sure that you screen articles for basic validity *before* the session. In this issue there is also some good advice from Schwartz on how to make a clear succinct presentation at journals clubs. Along with good food and coffee, we think this should be mandatory!

We note, though, that our current criteria of requiring a randomised trial for all treatments, may have to be slightly modified. One of the editors recently published an article on when randomised trials are not needed (*BMJ* 2007 Feb 17;**334**:349–51). This was triggered by his successful use of the "parent kiss" method to remove a bead lodged in a young patient's nose. It seems some treatments have such a rapid and dramatic effect that trials are not needed to pick the treatment signal from the prognostic noise. But currently the list of such dramatic treatments is pretty short.

EDITORS' CHOICE

To keep our practice up to date, it is helpful to ask with each issue of EBM what things you might start doing and what things you might stop? If I had to pick 1 change to make from this issue, it is the use of the ABCD score, which tells us who needs urgent investigation after a transient ischaemic attack (TIA). The likelihood of stroke is very high in the first days and weeks after a TIA, and reducing risk then is vital. We have previously published an evaluation of the ABCD rule, but Johnston *et al* have further validated the score and confirmed it is highly predictive. Of course, this needs to link to a rapid evaluation service, so you might need a little local lobbying also.

Among the others I will try out is teaching male patients with lower urinary tract symptoms a few simple things for self management (Van der Muelen). The intervention has 1 of our better NNTs, and is relatively simple and harmless. Also, although it won't directly change my practice, it's useful to know that SSRIs can start to work in depression within a week, with a close to linear build up of response over the first 6 weeks.

Unfortunately, some widely used interventions seem to have small or non-existent benefits. What appears to be the definitive trial of whether to start mammographic screening at 40 years of age or later didn't find a statistically significant reduction in breast cancer mortality (Moss). Similarly, a large trial of tympanostomy tubes did not show improvement in language outcomes (Paradise). I am sure neither of these will stop the arguments though.

PAUL GLASZIOU, FOR THE EDITORS
University of Oxford
Oxford, UK

EBM notebook

Improving journal club presentations, or, I can present that paper in under 10 minutes

F ifteen years ago we sought to develop a method for teaching residents how to make lean, pithy journal club presentations. Our aim was to help them distill an article down to its core while systematically reviewing its validity and telling a compelling story. Others have created successful journal clubs by explicitly linking the educational experience to questions raised in caring for patients.[1]

Brief article presentations are structurally similar to the brief case presentations we do all the time. On work rounds, morning report, or sign-out, the goal is to communicate the essential information about a patient in a concise, mostly standardised format that is easily digested by the listener. We reasoned that, just as learners progress from meandering and imprecise case presentations on clinical clerkships to brief, utilitarian sign-outs as senior residents, journal club presenters can learn to efficiently convey the essence of an article.

We introduce this model of journal club presentation to medical residents in a small group workshop early during internship and then deepen residents' skills during our clinical epidemiology course in the second year.[2] Residents' skills are reinforced and refined throughout residency at a weekly journal club attended by 10–20 residents, fellows, and faculty.

We use the following 10 step guideline to help presenters increase efficiency in assessing a study's validity and results and to increase confidence in limiting a presentation to the core essentials. Faculty members model the process and residents learn through reflective practice.

1. DESCRIBE THE CASE OR PROBLEM THAT ATTRACTED YOU TO THIS PAPER

Start your article presentation with a brief case presentation, or briefly explain how the article is relevant to a patient or problem you are considering. This helps listeners more fully engage with your presentation and makes it more of a story.

For example, *"An otherwise healthy 68 year old man came to see me after he suffered a transient ischaemic attack (TIA) and I wondered if he should be on a statin even though his risk of cardiac disease was low."*

2. EXPLAIN HOW YOU CAME ACROSS THIS ARTICLE

Very briefly describe the search strategy you used to track down this particular article.

"I found this paper by searching Medline using the terms Cerebrovascular accident, Hydroxymethylglutaryl-CoA reductase inhibitors, and the Clinical Query for therapy (maximising specificity) which identified 9 articles."

3A. DESCRIBE THE STUDY …

In a case presentation we start with some *standard descriptors* of the patient followed by the **chief complaint** or STATEMENT OF THE CLINICAL PROBLEM. For example:

- This is a *55 year old male smoker from Bangladesh* who presented with **2 hours of burning chest pain** and is ADMITTED AS A RULE OUT.

When presenting an article, we can think of some *standard descriptors*. For example:

- What type of question was asked—for example, diagnostic, therapeutic, prognostic, aetiologic, or economic?
- What type of study (method) was used—for example, randomised controlled trial, retrospective cohort, case control, meta-analysis, cross-sectional, descriptive, decision analytic, or cost effectiveness?
- Where was the study done (if relevant)—for example, multicentre, veteran affairs centre, population based, Antarctica, New York City, academic medical centre, or subspecialty clinic?
- Any other outstanding features—for example, well known author or first study of its kind.

So we might start by saying, *"This was a multinational, randomised, controlled trial of therapy, and the first study designed to answer the question …"*

3B … AND THE RESEARCH QUESTION:

The **chief complaint** of an article is the **research question or hypothesis** to be tested. A well built research question has 4 basic components (PICO—see section 5 below):[3]

- **P**opulation—who was studied?
- **I**ntervention or exposure—what therapy, risk factor, tests, etc.?
- **C**omparison or control–what alternative to intervention or exposure?
- **O**utcome—clinical, functional, economic, etc.?

"Does high dose atorvastatin for 5 years reduce the incidence of stroke among patients with recent stroke or TIA and no known coronary heart disease?"[4]

4. STATE THE IMPORTANCE/RELEVANCE/CONTEXT OF THIS QUESTION

Following this 1 line description of the study and statement of the question, concisely state the importance of this question. This information can usually be found in the author's introduction where they put their study in the context of other literature. This context can be described in 1–3 sentences.

"Therapy with statins reduces the risk of stroke among patients with coronary heart disease and those at increased risk of cardiovascular (CV) disease. No studies thus far, however, show that statin treatment decreases the risk of recurrent stroke among otherwise healthy patients with a history of stroke or TIA."

5. DESCRIBE THE METHODS BY GIVING MORE DETAIL ON THE QUESTION COMPONENTS

Following this brief background, 1 way of briefly describing the methods is to give a bit more detail on the Patients, Intervention, Comparison, and Outcomes (PICO) related to the question:

P—*"The study included 4371 patients, 60% men with an average age of 63 years and mean LDL cholesterol of 133 mg/dl. All patients had a recent stroke (69%) or TIA (31%). Those with atrial fibrillation, embolism from other cardiac sources, and subarachnoid haemorrhage were excluded."*

IC—*"Atorvastatin 80 mg daily or identical placebo."*

O—*"After a median of 4.9 years of follow up, the primary outcome was incidence of fatal or non-fatal stroke, and all cause death. Secondary end points include a composite end point of stroke or TIA, major coronary event, major CV event, acute coronary event, any coronary event, revascularisation, and any CV event."*

6. STATE YOUR ANSWERS TO THE CRITICAL APPRAISAL QUESTIONS ON VALIDITY

Next, briefly answer the appropriate critical appraisal questions on validity using the *JAMA users' guides to the medical literature*[5] and elaborate with some explanation, questions, or concerns if needed. Although it is a bit formulaic to go through each question, it is a good habit to develop, and use of the GATE frame makes it easier.[6] Remember, if you suspect bias, consider not only its possible presence, but also its direction, magnitude, and impact on the study's conclusions; not all flaws are fatal. Be cautious to not get lost in the statistics/analysis section. Remember, "Statistics are a tool while study methods rule!"

For a study of the efficacy of therapy, these questions apply:

- Did the experimental and control groups start out with a similar prognosis?

  – Were patients randomized? YES.
  – Was randomisation concealed? YES.
  – Were patients analysed in the groups to which they were randomised? YES—intention to treat analysis.
  – Were groups similar re known prognostic factors? YES—see table 1.

- Did the experimental and control groups retain a similar prognosis after the study started?

  – Were patients, clinicians, and outcome assessors aware of group allocation? NO—all were blinded to random allocation.
  – Was follow up complete? YES and similar in each group.

Remember, ''The conclusions givith but the methods taketh away! Caveat lector—reader beware!''

7. SUMMARISE THE PRIMARY RESULTS

At last, the results. Some like to present the bottom line result up front in their presentation titles, similar to the format in *ACP Journal Club* and *Evidence-Based Medicine*. Alternatively, you can report the results after the descriptors and research question. We find that when browsing a journal our eyes go from the title (if it sounds interesting) to the conclusions in the abstract. The inner question is, ''If this is true (valid) would it be interesting or important to me?'' Or, if you prefer to keep people in suspense, save the bottom line answer for the results:

''Atorvastatin reduced the rate of fatal and non-fatal stroke from 13.1% on placebo to 11.2%, a statistically significant 16% relative reduction in risk over 5 years. There was no difference in overall mortality''

Limit your summary of the results to the primary question and only present secondary results if they are relevant. It is helpful to bring your listeners' eyes to a particular row on a table or a bar on a graph to illustrate your point. You will not insult anyone by taking them by the hand and leading them through the paper. And feel free to play with the numbers.

''As you can see under secondary outcomes in table 2, major coronary events were reduced by 35% from 5.1% to 3.4%. The primary result suggests an absolute reduction of 2% in fatal and non-fatal stroke so that we would need to treat 50 patients with 80 mg of atorvastatin for 5 years to prevent 1 event, a modest impact.''

8. DESCRIBE WHY YOU THINK THE RESULTS CAN OR CANNOT BE APPLIED TO YOUR PATIENTS/ SITUATION

Finish with your assessment of the study's external validity— can you apply these results to your patients? Or better, are the patients or setting so different from your own so as to make these findings useless to you? How much might you have to adjust the study findings due to differences between the study's patients or setting and your own?

''Would the efficacy be larger or smaller in older patients? In addition, the authors excluded patients at higher risk of haemorrhagic stroke and, in fact, atorvastatin may have increased the risk of haemorrhagic stroke in this study.''

9. CONCLUDE WITH YOUR OWN DECISION ABOUT THE UTILITY OF THE STUDY IN YOUR PRACTICE—RESOLVE THE CASE OR QUESTION WITH WHICH YOU BEGAN

If you started your presentation with a case, *be sure to leave time to come back to the case at the end* and try to apply the study's findings to your patient or problem. Give the listeners a sense of closure:

''Atorvastatin may modestly reduce the risk of recurrent cerebrovascular events in patients with recent ischaemic cerebrovascular accident or TIA. I will offer this medication to such patients but will still focus more on those at higher risk of cardiac events.''

10. FINALLY, PREPARE A 1 PAGE SUMMARY OF THE OUTLINE ABOVE AS A HANDOUT

The summary will serve as your notes for the presentation and will help guide the group's attention. It also provides a storable record of the article, similar to Critically Appraised Topics or CATs.[7]

Believe it or not, you can do all this in 10 minutes easy, 5 minutes with very tight editing, and 2–3 minutes hitting just the highlights.

These guidelines have dramatically improved the enthusiasm for, quality of, and attendance at our journal clubs, which have now been running continuously for more than 15 years. Residents are expected to present the paper in 10 minutes, provide a concise 1 page summary using the outline above, and lead a 20 minute discussion on the clinical and methodological issues. As a result, residents have improved both their presentation and critical appraisal skills. In our experience, this approach, familiar to residents because they are parallel to patient case presentations, is easily learned and portable. Developed for a smaller group of primary care residents, the model is now used for all medical residents and fellows. Slides from these workshops are available at www.evidence-basedmedicine.com/. We believe this model has contributed to the long running success of our journal club and made it a lively, relevant, and fun way to simultaneously explore methods and medicine.

MARK D SCHWARTZ, MD
DEBORAH DOWELL, MD
JACLYN APERI, MA
ADINA L KALET, MD, MPH
New York University School of Medicine
New York, New York, USA

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13th Oxford Workshop on Teaching Evidence-Based Practice

10th – 14th September 2007; Oxford, UK.
Chair for this workshop:
Prof. Paul Glasziou
Director, Centre for Evidence-Based Medicine;
University of Oxford.
The workshop is aimed at clinicians and other healthcare professionals, including those involved in mental health, who already have some knowledge of critical appraisal and experience in the *practice* of evidence-based health care and who want to explore issues around *teaching* evidence-based medicine.
Further details can be obtained at www.cebm.net/ or by emailing olive.goddard@dphpc.ox.ac.uk