A medical student journal club: design, implementation and importance
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Introduction
Multiple formats of journal clubs for medical residents have been developed and analyzed in the literature but there is a comparative lack of information regarding journal clubs for medical students. We present the design of a medical student journal club curriculum and its implementation with third year medical students enrolled in a neuromusculoskeletal medicine master’s program. In presenting our course we also discuss the importance of journal reading early in medical education, its implications on evidence based medicine (EBM), and how a medical student journal club should differ from those designed for residents.

The format for residency journal clubs varies greatly in different institutions and a whole host of designs have been reviewed in the literature (Sidorov 1995, Green 2000), but to our knowledge an adequate design for use with medical students has not been determined or even proposed. A thorough search of the medical database turned up only one paper that investigated the design and use of a journal club for medical students.

Student oriented design
Early in the design process it became clear that the goals and requirements of a journal club for medical student would be unique from the goals and requirements of one for residents or fellows. For example, medical students will require more of the basic scientific and clinical background review in order to understand the context of a paper within the current medical thinking. During the design process we identified the following core competencies that we hoped to review during the course:

- The students should be exposed to biostatistical approaches commonly used in the medical literature.
- The students should be exposed to a wide variety of paper types.
- The students should expand their basic medical knowledge.
- The students should be able to apply identify strong versus weak study designs.
- The students should exercise hypothetical clinical decision making based on each paper read.

Student feedback

Figure 1. With the enormity of available medical knowledge, students must be trained to properly interpret scientific papers.

Materials and methods
The journal club was implemented with a select group of students that were part of a yearlong Academic Medicine Scholarship program in which they put their clinical education on hold for twelve months and immerse themselves in on campus research opportunities and teaching first and second year students while also gaining a masters degree in neuromusculoskeletal medicine. The journal article selections focused on important papers in neuromusculoskeletal medicine.

The journal club designed was a five week course, where the students read and discussed two papers per week. Students met weekly for two hours, during which each paper was analyzed in a discussion led by two students. The ten papers were compiled in a packet that also contained explanatory Users’ Guides, a list of goals, a list of expectations, and a brief guide to presenting a paper. This packet was handed out in print during an introductory meeting.

Student feedback

Figure 2. The two texts that were used to provide a scholastic background in how to read a particular type of paper. Students were assigned to read selections from these texts that compliments the week’s scientific article.

Conclusions
We present a model for introducing the systematic evaluation of medical literature to medical students that we implemented in an advanced concepts in neuromusculoskeletal medicine course.

The results of the end of course survey presented here suggest a key question going forward: in this era of evidence based medicine, when is the most appropriate time to train physicians (or student-physicians) to interpret and apply medical literature? Presently, interpretation of medical literature seems to come relatively late in medical training, something that primarily takes place during residency. Possible benefits of earlier courses in journal reading include increased interest in cutting edge research among the clinical practitioner, increased interest in participation in clinical research, and more evidence based practice.

Future research should focus on exploring different ways to integrate medical literature interpretation with basic science teaching and on assuaging the benefits and harms of such programs.

Literature cited

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