GUIDELINES FOR CRITICALLY APPRAISED TOPIC (CAT) PREPARATION

TITLE
A declarative answer to the clinical question. Example: Manual therapies may be effective for migraine headaches.

BACKGROUND—Why are you asking the question?
Succinctly explain why you are asking the question. If you have a specific patient in mind, summarize his/her presentation. Summarize the aspects of presentation and care which motivate your clinical question.

CLINICAL QUESTION—What do you need to know to help this patient?
Use the PICO approach:
- Patient/problem: Specific group of patients your clinical question applies to (Example: adults with migraine headaches)
- Intervention: Treatment or test you are asking about (Example: manual therapy including chiropractic manipulation)
- Comparison: Treatment to which your treatment of interest is being compared (this might be a placebo/sham or no treatment (Example: medications commonly used for migraines)
- Outcome: The effect you are interested in (Example: decrease in frequency/severity of migraine symptoms)

Example: Do adults with migraine headaches (P) have decreased frequency and/or severity of symptoms (O) with chiropractic care (I) compared to other types of care (C)?

Different PICO elements will result in different search strategies and different answers! Compare example above with example below.

Example: Do adults with migraine headaches (P) have decreased frequency/severity of migraine symptoms (O) with spinal manipulation (I) compared to medication (C)?

FINDING THE EVIDENCE
Summarize how you conducted the literature search. It should have enough information that the reader could duplicate your strategy. Include:
- Search engine(s) (e.g., PubMed, Google Scholar, MANTIS; Index to Chiropractic Literature).
- Search terms used, including any Boolean operators such as "AND" or "NOT"
- Language restrictions (i.e., English only)
- Cutoff dates for literature inclusion (Example: 2009-2013)
- Inclusions/Exclusions to narrow the search (Examples: Inclusion: only systematic reviews; Exclusions: animal studies; conference proceedings; case reports)
- Additional search strategies if original search yielded only a few studies (Example: reference tracking)
- Number and types of studies identified (Example: 2 systematic reviews were identified.) NOTE: Use the highest level of evidence available; that is, if you find a systematic review, you do not need to include any of the studies that were covered in that review.

SUMMARY OF THE EVIDENCE
In text, summarize only the findings relevant to your clinical question. Use Table of Results to summarize characteristics of the articles included.

<table>
<thead>
<tr>
<th>Citation (first author last name, initials plus date—full citation at end of CAT)</th>
<th>Study design</th>
<th>Number of participants</th>
<th>Interventions</th>
<th>Results</th>
<th>Adverse effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: Chaibi A 2011</td>
<td>systematic review; randomized controlled trial</td>
<td>Example: 150 adults with migraines</td>
<td>Example: Manual therapy including chiropractic manipulation</td>
<td>Example: Manual therapy as effective as comparison treatment</td>
<td>Example: None noted</td>
</tr>
</tbody>
</table>

HOW RELEVANT IS THE EVIDENCE TO THE QUESTION?
Briefly comment on quality (Example: high level of evidence such as systematic review of multiple RCTs) and strength (Example: large clinically important effect on condition of interest). Note any limitations and (if present) major flaws in studies included.

CLINICAL BOTTOM LINE
Summarize answer to your clinical question based on the literature reviewed.

REFERENCES
Include only those references to evaluated for the CAT. Number references sequentially and use this format for citations:
Manual therapies may be effective for migraine headaches

BACKGROUND
A 35 year-old-woman with a 20 year history of migraines is considering chiropractic care. She is currently taking amitriptyline but has experienced side effects. When not taking medication, she has at least 1 migraine per week. She has never received chiropractic care and would like to see the research supporting it for migraines to help her make a decision about her care.

CLINICAL QUESTION:
Do adults with migraine headaches (P) have decreased frequency/severity of migraine symptoms (O) with spinal manipulation (I) compared to medication (C)?

SEARCH STRATEGY
• Search engine: PubMed
• Search terms used “chiropractic AND migraines;" “manual therapy AND migraines"
• Inclusion/exclusion: Reviews; English language; 2009-2013; humans

RESULTS
4 articles were identified; 3 were systematic reviews, and 1 was a case report with a review included.

<table>
<thead>
<tr>
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<th>Number of participants/studies included</th>
<th>Interventions</th>
<th>Results</th>
<th>Adverse events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chaibi 2011^1</td>
<td>systematic review</td>
<td>7 RCTs: 2 massage therapy; 1 physiotherapy; 4 chiropractic SMT</td>
<td>Manual therapy including chiropractic SMT</td>
<td>Massage therapy, physiotherapy, relaxation and chiropractic SMT might be equally effective as amitriptyline, propranolol &amp; topiramate for migraine prophylaxis</td>
<td>None noted</td>
</tr>
<tr>
<td>Bryans 2011^2</td>
<td>systematic review and guideline</td>
<td>7 RCTs for migraines</td>
<td>Chiropractic care including SMT and other modalities</td>
<td>SMT + multimodal interventions including massage (episodic/ chronic migraine).</td>
<td>Not addressed in most RCTs; those that did: none or minor.</td>
</tr>
<tr>
<td>Posadzki 2011^3</td>
<td>systematic review</td>
<td>3 RCTs</td>
<td>SMT by any practitioner</td>
<td>2 RCTs showed positive effect; 1 showed no effect</td>
<td>1 did not report; 2, none; 1, minor transient</td>
</tr>
</tbody>
</table>

Abbreviations: RCT, randomized controlled trial; SMT, spinal manipulative therapy

DISCUSSION
The number of studies and quality of evidence were not high; however, most evidence indicated a positive effect of SMT and other manual therapy such as massage on management and prophylaxis of migraine. Although reporting of adverse events was not consistent, those reported were minor and transient.

CLINICAL BOTTOM LINE
It appears that chiropractic care including SMT may be as effective as commonly used medications for prophylaxis and management of migraines in adults, and that adverse effects are not common and when present, are minor and transient.

REFERENCES