How Journal Club Changed My Practice: Orthoses & Patellofemoral Pain Syndrome

Lit search case study presented by Deb Monkman
Practice update presented by Chris Napier, MScPT, SPC Diploma
Tuesday, October 9, 2012
What town are you Webinaring from tonight?

Please type in the chat box to everyone!
Outline

1. **Intro** – moving on from Orthoses & PFPS Journal Club with Alison Hoens and Dr Michael Hunt

2. **PICO** – Asking a clinical question

3. **Which database? What search terms?**

4. **How to evaluate search results**

5. **How to get a full-text article**

6. **Over to Chris for practice update!**
1. Intro
Journal Club: Practice Summary

• **Question:** Should policy or practice change as result of the evidence contained in this review?

• **Alison’s Answer:** Given that the number needed to treat is so low, that the cost of the intervention is low and that there are no documented significant adverse risks from prescription of orthotics (yet acknowledging that the strength of evidence for effectiveness still requires more corroborating evidence from other studies) I would **not prescribe orthotics for all patients with PFPS** but **would consider discussing their potential prescription with patients who:**
  – were 18-40 years of age
  – had symptoms for > 6 weeks duration
  – in my clinical experience were more likely to benefit
  – expressed a desire to trial them
  – could afford them
Where Is All the Good Stuff? – On the Members’ Site, under Library

(Librarian & Knowledge Broker’s Stuff!)

Access to databases & journals

Online tutorials, webinar recordings & course materials
Lit Search Wish List
You said...

• Watch how the experts do it, and try to get some tips and tricks to make the process faster
• Easiest way to locate articles for non-computer geeks
• How to formulate efficient search questions
• How to narrow the search
• Info on the most common mistakes people makes when searching for lit.
• Which are our first go-to choices for journal databases for this topic? Time-efficiency tips on finding and reviewing the articles
Your Search Results?

• Do a lit search for articles on other ways to treat PFPS. Pitfalls? Problems? Success?

  – Which articles did you find particularly useful?
What are the most common mistakes people make when lit searching?

1. Not doing a PICO – being too general (e.g., I need info on orthotics)
2. Searching only Medline – search CINAHL too
3. Using only one term - think synonyms & spellings (e.g., orthotic(s), orthosis/es) and not checking for subject headings (foot orthoses, orthotic devices) [Remember sneaky ‘title’ search]
4. Forgetting to narrow down a search by limiting to age groups, publications types, years, etc.
5. Limiting to full-text too soon – best to find the good stuff and then get the full-text, in the A-Z List… and don’t forget to ask me!
1. My clinical question is…
2. PICO (population, intervention, comparison, outcome)
3. Databases to be used: Medline, CINAHL etc
4. Limits: publication type, years, age groups
5. Concepts – keywords & subject headings
2. PICO – How to Ask the Question
What is PICO?

- **Population**: age group, gender, type(s) of injury, acute/chronic, hospital/surg setting, etc.
- **Intervention**: What treatment(s)
- **Comparison**: Physio treatment, surgery, no treatment, etc.
- **Outcome**: Pain, function,

Tutorial: [http://www.youtube.com/user/BCPhysio#p/u/1/pdy5W5OzqGM](http://www.youtube.com/user/BCPhysio#p/u/1/pdy5W5OzqGM)
1. In adults with chronic PFPS, do orthotics reduce pain?

2. What physiotherapy interventions are effective for PFPS? (e.g., strengthening, taping)

3. Is gait retraining effective for adults with PFPS?

4. What is the mechanism by which orthotics help PFPS?
3. Which database? What search terms?
Which database(s) would you search? Watch online tutorial

OPEN POLL #1

1. Medline/PubMed
2. CINAHL
3. PEDro
4. Rehab +
5. Google Scholar
6. EBMR
7. Google

All these databases are useful, depending on your needs.

For broadest results, use Medline & CINAHL.

For highest levels of evidence only, use PEDro
### What are the concept?

### What are the synonyms?

### What are the MeSH or CINAHL Headings?

<table>
<thead>
<tr>
<th>Orthotics</th>
<th>Patellofemoral pain syndrome</th>
<th>Physiotherapy interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orthotic* - keyword [* searches for other endings, such as orthotics]</td>
<td>Patellofemoral – keyword</td>
<td>Taping or strengthen* or gait retrain* - specific PT keywords</td>
</tr>
<tr>
<td>Orthos* - keyword [* searches orthosis or orthoses]</td>
<td>PATELLOFEMORAL PAIN SYNDROME – subject heading in Medline</td>
<td>Physiotherap* or physical therap* or rehab* - keywords [Note: rehabilitation is a subheading]</td>
</tr>
<tr>
<td>FOOT ORTHOSES – subject heading in CINAHL</td>
<td>PATELLOFEMORAL PAIN SYNDROME – subject heading in CINAHL</td>
<td>Explode PHYSICAL THERAPY – subject heading in CINAHL; exploding includes all the specific types of PT</td>
</tr>
<tr>
<td>ORTHOTIC DEVICES – subject heading in Medline [Note: do not explode]</td>
<td></td>
<td>Explode PHYSICAL THERAPY MODALITIES - subject heading in Medline; exploding includes all the specific types of PT</td>
</tr>
</tbody>
</table>

- Patellofemoral pain syndrome
- Orthotics
- Taping or strengthen* or gait retrain* - specific PT keywords
- Patellofemoral – keyword
- Physiotherap* or physical therap* or rehab* - keywords [Note: rehabilitation is a subheading]
- Explode PHYSICAL THERAPY – subject heading in CINAHL; exploding includes all the specific types of PT
- Explode PHYSICAL THERAPY MODALITIES - subject heading in Medline; exploding includes all the specific types of PT
Systematic review search strategy (Journal Club article)

Arthralgia/ or pain,
(lateral compression or lateral facet or lateral pressure or odd facet) adj [pain or syndrome or dysfunction]

AND

Knee joint/ or knee/ or patella/
Anterior knee pain, mp 581 541 524 200
(patell$ or femoropatell$ or femoro-patell$ or retropatell$) adj [pain or syndrome or dysfunction]
(chondromalac$ or chondropath$) adj [knee$ or patell$ or femoropatell$ or femoro-patell$ or retropatell$]

AND

Orthotica
Orthoses
Orthosis
Absolute beginner? Try GOOGLE SCHOLAR
Imaging, not therapeutic US
"patellofemoral pain syndrome" in quotes = phrase

Foot orthoses and physiotherapy in the treatment of patellofemoral pain syndrome: randomised clinical trial
N Collins, K Crossley, E Beller, R Darnell... - British journal of ..., 2009 - bjsportmed.com

ABSTRACT Objective To compare the clinical efficacy of foot orthoses in the management of patellofemoral pain syndrome with flat inserts or physiotherapy, and to investigate the effectiveness of foot orthoses plus physiotherapy. Design Prospective, single blind, ... 
Cited by 75 Related articles View as HTML Get at CISTI All 17 versions

The immediate effects of foot orthoses on functional performance in individuals with patellofemoral pain syndrome
CJ Barton, HB Menz, KM Crossley - British Journal of Sports Medicine, 2011 - bjsm.bmj.com

Objective Patellofemoral pain syndrome (PFPS) often results in reduced functional performance. There is growing evidence for the use of foot orthoses to treat this multifactorial condition. In this study, the immediate effects of foot orthoses on functional performance ... 
Cited by 7 Related articles Get at CISTI All 10 versions

The additional effect of orthotic devices on exercise therapy for patients with patellofemoral pain syndrome: a systematic review
NM Swart, R van Linschoten... - British journal of sports ..., 2012 - bjsm.bmj.com

Abstract The aim of the study is to determine "the additional effect of... function" for patellofemoral pain syndrome (PFPS). The additional effect of orthotic devices over exercise therapy on pain and function. A systematic literature search was conducted in MEDLINE, ... 
Related articles All 9 versions

The efficacy of foot orthoses in the treatment of individuals with patellofemoral pain syndrome: a systematic review
CJ Barton, SE Munteanu, HB Menz... - Sports ..., 2010 - ingentaconnect.com
Abstract: Patellofemoral pain syndrome (PFPS) is a highly prevalent condition, often reducing functional performance and being linked to osteoarthritis development later in life.
Search EBSCO Medline & CINAHL
Quick & Dirty Search

Select both Medline & CINAHL

Searching both keywords and subject headings. It will include:
FOOT ORTHOSES, ORTHOTIC DEVICES, PATELLOFEMORAL PAIN SYNDROME subject headings

Refine your results
Full Text
References Available
Abstract
Keywords
Subjects
Article Type
Academic Journal
Order Results By
Date Desc
Page 121
Hot Tip!
‘Select a field’ = Title. Then look at terminology used

No full-text pdf or Linksource – so email Deb for article
Benefits of custom-made foot orthoses in treating patellofemoral pain.

Authors: Munuera PV; Mazoteras-Pardo R

Author Address: University of Seville, Calle Avicena, Seville, Spain. pmunuera@us.es


Publication Type: Clinical Trial; Journal Article

Language: English


Publication Model: Print-Electronic.

MeSH Terms: Foot*
Orthotic Devices*
Patellofemoral Pain Syndrome/therapy
Adolescent ; Adult ; Equipment Design ; Female ; Foot Deformities/complications ; Humans ; Male ; Pain Measurement ; Patellofemoral Pain Syndrome/etiology ; Polyethylene ; Polypropylene ; Treatment Outcome ; Young Adult
1. FrONTAL PLANE BIOMECHANICS IN MALES AND FEMALES WITH AND WITHOUT PATELLOFEMORAL PAIN.

Abstract Available By: Nakagawa TH, Moriya ET, Maciel CD, Serrão AF, Medicine And Science In Sports And Exercise. ISSN: 1530-0315, 2012 Sep; Vol. 44 (9), pp. 1747-55; PMID: 22460471

Database: MEDLINE with Full Text

Add to folder

2. INFLUENCE OF INFRAPATELLAR AND SUPRAPATELLAR STRAPS ON QUADRICEPS MUSCLE ACTIVITY AND ONSET TIMING DURING THE BODY-WEIGHT SQUAT.


Check LinkSource for more information
These are the main “physio terms”.

MH physical therapy+ means: search all the narrower terms (+ = ‘explode’) under the subject heading (MH) for PT.

Also consider: conservat* or non surg* or nonsurg* or non operat* or nonoperat*
Limit to publication types for highest levels of evidence:

**Medline**
- Review (narrative & systematic)
- Metaanalysis
- Guideline
- Practice guideline
- Randomized controlled trials

**CINAHL**
- Review (narrative)
- Systematic review
- Metaanalysis
- Practice guidelines
- Randomized controlled trials

Use “Advanced Search” button under the search box. Hold down Control key to select more than one.
Add a slide showing the articles Chris refers to and how to get the full-text
4. EVALUATING SEARCH RESULTS
Tips on Evaluating the Results from Deb – Step 1

1. Scan abstracts – what is the state of the literature? find better search terms; all case studies or lots of RCTs or reviews?

2. Read a current article intro - reviews the literature and cites studies you may want (search in ‘title,’ limit to full-text)

3. Concerned about quality of RCTs? Check PEDro’s ratings of RCTs
Tips on Evaluating the Results from Alison – Step 2

1. **Does the title** indicate it is relevant to your PICO?

2. **Is it from a reputable source?** Peer reviewed journal

3. **Does the author list** indicate someone who has published quite a bit in this area?

4. **Check the abstract** for: concerns over methods, suitable outcome measure, results not “overstated”
5. GETTING THE FULL-TEXT ARTICLE
Will you find free full-text on Google, Google Scholar or PubMed?

• Limited free full-text on web
  – Some older articles are free
  – Open access journals are free

• Go to PABC eLibrary to find the full-text
How can you get full-text articles?

1. Is it free on the Web? Google the article - is the full-text free or not? (often not)
   When searching PubMed, does it link to free full-text? (often not)

2. Look in the PABC eLibrary – [A-Z Journals List]: Is the journal you want available in full-text?

3. Ask me (or your hospital librarian if you work at a hospital) – I have more access
What are the most common mistakes people make when lit searching?

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Summary

• **PICO** – get clear on what you want to find when searching, scanning & reading articles

• **Google or Google Scholar** – JACKPOT!?? EBSCO Medline & CINAHL are best bets

• **Search terms**: think of keywords (broad, narrow, synonyms), look up subject headings, sneaky ‘search in title’ trick & see what terms are used

• **Limits**: years, pub types, age groups, fulltext

• **Evaluate & revise** search based on better terms, subject headings, as necessary

• **Full-text** – in PABC A-Z Journals List, free on web, or ask me
6. Over to Chris
Practice Questions

1. Treatments for PFPS include orthotics, taping, strengthening and gait retraining.
   – Are you currently using these in your practice?
   – What do you find most helpful for your patients?

2. What do you think is the mechanism by which orthotics help PFPS?
QUESTIONS?

Please fill out the post-webinar survey

THANK YOU!

Email Deb at librarian@bcphysio.org

All course materials & a recording of this webinar are on the members site > Library